

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MISSOURI
EASTERN DIVISION

FEDERAL TRADE COMMISSION,)	
)	
Plaintiff,)	
)	
v.)	Case No. 4:20-cv-00317-SEP
)	
PEABODY ENERGY CORPORATION)	
)	
and)	
)	
ARCH RESOURCES, INC.,)	
)	
Defendants.)	

MEMORANDUM OPINION

Flipping a light switch is the culmination of a long and convoluted process. The electricity needed to turn on that light—indeed, the electricity needed for any purpose, be it residential, commercial, or industrial—is generated at power plants owned by investor- or publicly-owned utilities and cooperatives, independent power producers, or the government. Joint Stipulation of Uncontested Facts (“JSUF”) (Doc. [301-1]) ¶ 4. Each power plant consists of one or more electricity generating units (“EGUs”). *Id.* ¶ 5. Each EGU uses one of a wide range of generating technologies to transform the energy in a specific fuel—e.g., uranium, coal, oil, natural gas, sunshine, wind, water—into electricity. *Id.* ¶ 6. The typical user of electrical power is indifferent to the method used to generate that power; to most of us, a megawatt is a megawatt is a megawatt. *Id.* ¶ 8. But to energy companies, utilities, policymakers, regulators, and investors (to name just a few), the process by which certain fuels are selected—or not—for

use in electricity generation is a matter of momentous consequence. This case is about that process.

One of the most important fuels for electricity generation is thermal coal. Though it has steadily ceded ground to natural gas and renewables over the past twenty years, coal still provides 20 percent of our nation’s electricity, and it is projected to remain an important fuel source for decades to come. Defendants Peabody Energy Company (“Peabody”) and Arch Resources, Inc., (“Arch”) are the two largest coal producers in the United States. Peabody Energy Corp.’s Answer & Affirmative Defenses (Doc. [54]) (“Peabody Answer”) ¶¶ 15-16. Peabody and Arch propose to mitigate the effects of the coal industry’s overall decline on their employees and investors by combining some of their thermal coal operations in a joint venture (the “JV”). JSUF ¶ 30. Defendants announced their intention to form the JV on June 19, 2019. *Id.*

Eight months later, three days before the JV was to be consummated, the Federal Trade Commission (“FTC”) filed suit in this Court seeking an immediate injunction under Section 13(b) of the Federal Trade Commission Act to prevent the proposed JV from moving forward until the FTC could conduct an administrative hearing to determine whether it would violate Section 7 of the Clayton Act. Defendants stipulated to a temporary restraining order pending this Court’s hearing on the FTC’s Motion for Preliminary Injunction (Doc. [137]). After two COVID-19-related delays, that hearing took place in mid-July 2020, less than 5 months after the FTC’s initial filing. In the interim, the parties worked furiously to exchange written discovery, take dozens of depositions, and prepare hundreds of pages of briefing and thousands of exhibits—all within the extraordinary constraints imposed by a global pandemic.

In considering the Motion, the Court has been the beneficiary of those herculean efforts, as both sides ably distilled their complex arguments into coherent, comprehensible presentations over the course of a nine-day evidentiary hearing, followed by proposed findings of fact and conclusions of law and closing arguments. Having carefully considered all of those submissions, the Court finds that the FTC has met its burden under Section 13(b) of the Federal Trade Commission Act for a preliminary injunction; accordingly, its Motion for Preliminary Injunction (Doc. [137]) is granted.

BACKGROUND

I. Factual Background

A. SPRB coal mining and transportation

The case is principally concerned with one of the several fuels that can be used for energy production: thermal coal. JSUF ¶¶ 13-14. It is even more narrowly focused, in fact, on thermal coal that is mined in one specific geographical region, the Southern Powder River Basin (“SPRB”), located in northeastern Wyoming, near the town of Gillette. *Id.* ¶¶ 16-17.

Unlike some mines in other parts of the country, SPRB mines are surface mines, meaning they are not underground. Tr. Vol. 2A (Jones) 5:20-21. Mining SPRB coal therefore requires removing “overburden,” the material covering the coal. *Id.* at 5:22-23. The number of cubic yards of dirt that must be removed to access one ton of coal is the “strip ratio.” Tr. Vol. 5A (Lang) 110:13-17. As an example, if a mine has a strip ratio of 4, that means that, on average, 4 cubic yards of dirt must be removed to access one ton of coal. *Id.* at 110:17-18. An SPRB coal mine’s cost structure is primarily a function of the how difficult it is to access the coal, which is most succinctly captured by a mine’s strip ratio. Tr. Vol. 5A (Kellow) at 64:22-65:2.

Coal companies design mines to minimize the cost of extracting coal, which involves optimizing the use of equipment used to remove overburden. There are three ways to move overburden. Tr. Vol. 5A (Lang) at 109:1-3. The most cost-effective method is explosives, whereby mining companies blast the overburden over the top of the pit and land it in another pit, revealing the material below what was blasted. *Id.* at 109:3-9. These can be massive explosions. Paul Lang, Arch's CEO and himself an experienced coal miner, stated that he has detonated as much as approximately 8.5 million pounds of explosives at a time. *Id.*

The second cheapest way to move large volumes of material is a dragline. *Id.* at 109:9-11. A dragline is an order of magnitude more expensive than explosives, but it is still very efficient. *Id.* Draglines are some of the largest earth-moving equipment in the world, with buckets that can scoop as much as 165 cubic yards at a time. *Id.* at 108:18-21. However, because of their size and the way they function, there are limitations on what they can do and where they can do it. *Id.* at 109:13-18.

The third way to move material is truck shovels, which are two to three times more expensive than a dragline. *Id.* at 109:19-22. When a company designs a coal mine, it optimizes the mine plan for the less expensive technologies, explosives and draglines. *Id.* at 109:23-25. As coal is extracted from a mine, the cost of extracting the marginal ton of coal increases as explosives and draglines become less feasible, and expensive shovel trucks are eventually needed for an increasing share of overburden removal. *Id.* at 110:24-111:17.

Once accessed, the coal is trucked out of the pit in six-foot chunks and run through a crusher, which breaks it up into two-inch-long pieces that customers can put into their boilers. Tr. Vol. 5B (Lang) 11:24-12:7. The crushed coal is loaded onto conveyor belts, which transport it to loadouts, where it is loaded onto train cars. *Id.* at 11:12-24.

Coal customers buy and take possession of the coal when it is loaded onto railcars in the SPRB. Tr. Vol. 1B (Meyer) 22:24-25. Hence, the price paid for the coal is sometimes called the “mine-mouth” price. [REDACTED] That commodity price is only a fraction of the coal’s total delivered cost because customers also pay to transport the coal from the SPRB to wherever it will be used. *Id.* at 23:1-12. The transportation costs are substantial, sometimes up to more than half of the total delivered cost of the SPRB coal. *See, e.g., id.*

All SPRB mines are along a rail line. The portion of the rail line south of the town of Gillette, Wyoming, is referred to as the “joint line” because it is owned by both the Burlington Northern Santa Fe (“BNSF”) and Union Pacific railroads. [REDACTED] The joint line is quadruple track through the SPRB coal mines, making it an efficient means of transporting coal out of the SPRB. *Id.* Mines north of Gillette are generally on a BNSF line only, which affects available prices and destinations for coal from that area. *Id.*; Tr. Vol. 3B (Sandlin) 81:19-82:1 (mines not along the joint line are “a bit more limited” in what power plants they can serve). The Buckskin, Rawhide, Eagle Butte, Dry Fork, and Wyodak mines are all north of Gillette and are served only by the BNSF line, while the Caballo, Belle Ayr, Cordero Rojo, Coal Creek, Black Thunder, NARM, and Antelope mines are all south of Gillette and served by the joint line. PX8001 (Hill Report) Fig. 2.¹ The lack of rail competition for mines north of the joint line has led to higher prices for transportation for coal from these mines, making such coal somewhat less attractive relative to mines served by the joint line. *See, e.g.,* [REDACTED] does not solicit SPRB coal suppliers with only mines north of the joint line because they are “not competitive from a transportation standpoint”); [REDACTED]

¹ Citations to exhibits are in the format “exhibit number—page number.” For example, “PX9010-002” refers to page 2 of Plaintiff’s Exhibit 9010. Expert reports are cited by paragraph number, where available.

only solicits SPRB coal suppliers with mines on the joint line); Tr. Vol. 5B (Stuchal) 93:9-12 (NPPD purchases SPRB coal from all producers on the joint line and none on the BNSF-only line).

B. ISOs and RTOs

When coal arrives at a power plant, it is not yet determined how frequently the plant will burn the coal or how much it will burn. Many utilities do not make these decisions themselves. Rather, the majority of all U.S.-generated electricity is managed through seven regional electricity markets known as Independent System Operators (“ISOs”) or Regional Transmission Organizations (“RTOs”).² JSUF ¶ 9; PX8001 (Hill Report) ¶ 62. The Southwest Power Pool (“SPP”), the Midcontinent Independent System Operator (“MISO”), the Energy Reliability Council of Texas (“ERCOT”), and the Pennsylvania, Jersey, Maryland Power Pool (“PJM”) together account for nearly 75% of all SPRB coal consumed in the United States. DX4005 (Carey Report) ¶ 19, Fig. 6. These organizations conduct daily auctions to match regional electricity demand as projected by providers, such as utility companies, with electricity supply offers from generators to maintain reliable and cost-effective electricity service in their geographic areas. DX4005 (Carey Report) ¶¶ 13, 27-32. These auctions are conducted on both day-ahead and real-time bases. *Id.* ¶ 27.

ISOs, and not the electricity generators, ultimately determine which EGUs “dispatch”—i.e., generate electricity and provide it to the grid—at every moment of every day. Tr. Vol. 6A (Carey) 24:13-16. The ISOs determine which EGUs dispatch on a “least-cost basis,” meaning that those EGUs that can supply the anticipated electricity demand at the lowest cost will be

² Functionally, ISOs and RTOs serve similar purposes in the electricity industry, and this opinion uses those terms interchangeably.

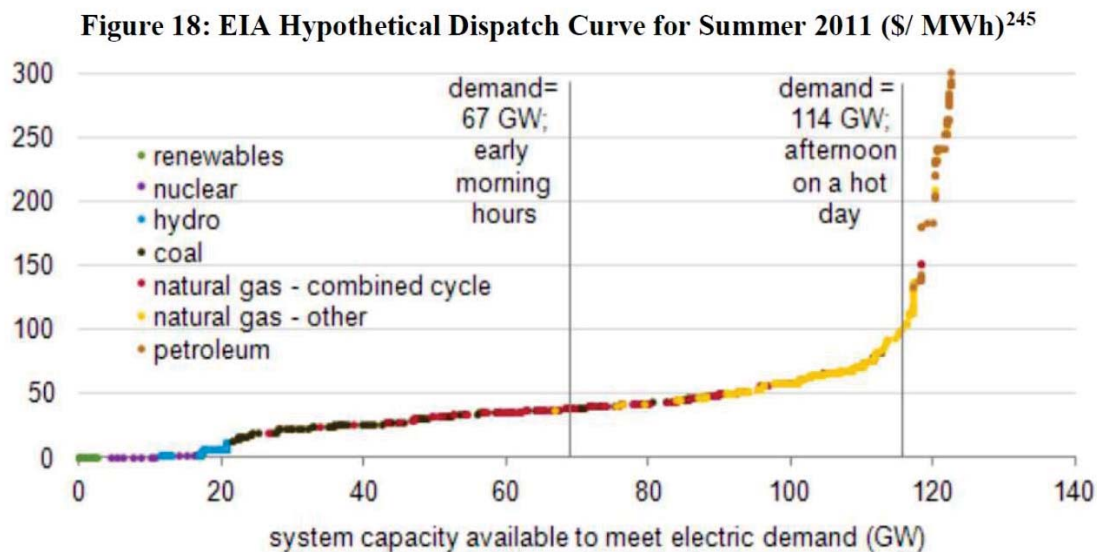
instructed to run by the ISO. DX4005 (Carey Report) ¶ 28. EGUs in an ISO must make a confidential bid, based on the variable cost to supply a unit of production. *Id.* ¶¶ 30, 32. Based on the anticipated amount of energy (for the day-ahead market) or the actual amount of energy being demanded (for the real-time market), each ISO sets a market-clearing price—that is, the price at which the bid of the marginal unit of supply meets demand. *Id.* ¶ 31. If an EGU’s bid is less than the market-clearing price, the ISO will instruct that EGU to generate, and the EGU’s operator will be paid the market-clearing price for its power—even if its bid was less than the market-clearing price. *Id.*; DX4001 (Bailey Report) ¶ 13; Tr. Vol. 6A (Carey) 30:5-19. When this happens, the EGU is described as “in the money.” DX4005 (Carey Report) ¶ 31. If, by contrast, an EGU’s bid is greater than the market-clearing price, the ISO will not instruct that EGU to generate, and the EGU’s operator will not be paid for that unit, putting the EGU “out of the money.” *Id.*

This process—referred to as “merit-order dispatch” or “least-cost dispatch”—results in the lowest cost electricity dispatching (i.e., on a “least-cost basis”), regardless of the method by which the electricity is generated. *Id.* ¶ 28. In the dispatch process, then, EGUs within an ISO compete against all EGUs of all fuel types within that same ISO to generate electricity. DX4001 (Bailey Report) ¶ 13; Tr. Vol. 3B (Trushenski) 40:2-19. While certain areas of the country are not covered by an ISO, vertically integrated electrical utilities in those areas, such as the Tennessee Valley Authority (“TVA”) and Southern Company, rely on merit-order dispatch to ensure cost-effectiveness. *See, e.g.*, Tr. Vol. 7B (Fuller) 9:10-10:10.³

³ In lieu of, or in addition to, generating electricity, utilities can also purchase electricity from the ISO. *See, e.g.*, [REDACTED] elected to buy electricity from MISO rather than purchase Black Thunder coal and run its own units). A utility may elect to purchase electricity from an ISO if it is able to purchase it below the utility’s cost to generate. Tr. Vol. 6B (Clark) 76:22-25. Therefore, in at least some circumstances, if an SPRB price increase makes it more economical for a

C. Electricity dispatch curves

The mechanism by which merit-order dispatch occurs is the electricity dispatch curve, sometimes referred to as a dispatch “stack.” DX4001 (Bailey Report) ¶¶ 13-14.



DX4005 (Carey Report) Fig. 18. Generally speaking, different EGU types occupy different parts of the dispatch curve. Some units—typically renewables such as wind, solar, and hydroelectric—generate power at close to no marginal cost because they have no fuel costs. Such EGUs are therefore bid into the market at low cost and typically are the first to run when available and needed to fulfill anticipated energy demand. DX4005 (Carey Report) ¶ 84. Nuclear-powered EGUs are typically next on the dispatch curve, as these units also have low marginal costs and are dispatchable.⁴ Tr. Vol. 1B (Meyer) 11:19-22. EGUs that generate electricity from fossil fuels—e.g., coal, natural gas, and oil—have higher variable costs,

utility to buy electricity from the ISO than to burn SPRB coal, the utility may decide to purchase that power at a price lower than its cost to generate. *Id.* at 77:23-78:3.

⁴ A resource is “dispatchable” if a utility can control when they generate power. Tr. Vol. 7B (Fuller) 18:22-19:8. If a unit’s production is determined by forces outside of a utility’s control—like the blowing of the wind or the shining of the sun—then that resource is “non-dispatchable.” *Id.*

primarily because of their fuel costs. Tr. Vol. 7B (Fuller) 10:2-5. These EGUs are typically bid in at their variable costs, appearing further up and to the right of the dispatch curve. DX4005 (Carey Report) ¶ 99; Tr. Vol. 5B (Stuchal) 99:11-17 (NPPD submits its nuclear plant as a must-run generating facility, followed by wind generation, then other renewables including hydro, and finally coal and natural gas).

As described above, an EGU is typically dispatched only when its bid is at or below the market-clearing price. The more low-cost bids are submitted by renewable- and nuclear-powered EGUs, the further fossil fuels, including coal, are pushed to the right on the dispatch curve, because the marginal cost of generating an additional megawatt from renewables or nuclear is virtually always lower than the marginal cost of generating that megawatt from coal. DX4005 (Carey Report) ¶ 99. Whatever the market-clearing price, then, increasing renewable generation likely means that fewer fossil fuel-powered EGUs will be called to run. Tr. Vol. 6A (Carey) 46:14-19.

Whether because of market-order dispatch, planned or unplanned maintenance, or other reasons, an EGU does not run at its maximum capacity at every moment of every day of every year. Tr. Vol. 1B (Meyer) 10:2-16. An EGU's "capacity factor," or "utilization rate," measures how often a unit runs as a fraction of its total capability. Tr. Vol. 2A (Peterson) 39:25-40:1. A lower capacity factor means that a unit runs less often; a higher capacity factor means that it runs more often. The higher a unit's capacity factor, the more economical it is to operate. Vol. 1B (Meyer) 10:3-12.

D. Recent trends in energy generation

The most recent major antitrust proceeding in the coal industry took place in 2004. *F.T.C. v. Arch Coal, Inc.*, 329 F. Supp. 2d 109 (D.D.C. 2004). The commercial circumstances of

coal companies have changed significantly in the intervening sixteen years. The three most important changes for this case's purposes are the significantly lower price of natural gas; the substantial increase in renewable generation; and the steep decline in coal generation. The confluence of those trends has led to a significant decrease in coal consumption since 2004.

1. Declining natural gas prices

Technological advancements such as hydraulic fracturing, sometimes referred to as “fracking,” as well as the discovery of vast reserves of natural gas in shale rock formations throughout the United States, have precipitated a remarkable decline in the cost of producing natural gas. DX4001 (Bailey Report) ¶ 17. Since 2008, the price of natural gas has fallen by more than 75%, from over \$8/mmBTU to under \$2/mmBTU. *Id.* These developments have made the United States the world's largest natural gas producer. DX4003 (Israel Report) ¶ 50. At the same time, new and highly efficient combined cycle gas turbines (“CCGTs”) have made natural gas EGUs much more efficient at converting the energy stored within natural gas into electricity. DX4001 (Bailey Report) ¶ 17; [REDACTED]

The combination of cheap natural gas and efficient CCGTs has made electricity generation from natural gas more cost-effective than in the past, causing many utilities to construct natural gas-powered EGUs that compete with coal-powered EGUs to dispatch. DX4005 (Carey Report) ¶¶ 75-77. As a result, average capacity factors within MISO, SPP, and ERCOT for natural gas-powered EGUs have risen from approximately 30-40% to 50-60% from 2010 to 2019, while average capacity factors for coal-powered EGUs have fallen from approximately 70% to 40% over that same time period. *Id.* ¶¶ 93-94 & Figs. 13-14.

2. Increasing renewable generation

Over the last several decades, governmental authorities have introduced subsidies and other policies designed to encourage investment in renewable energy generation, and electricity generators have directed their capital investments accordingly. Tr. Vol. 1B (Meyer) 16:13-15 (“We are adding renewables right now . . . to meet compliance with Missouri’s renewable energy standard.”). Accordingly, electricity generation from wind and solar has doubled since 2010. Tr. Vol. 6A (Carey) 45:3-45:8.

Solar and wind power are intermittent and “non-dispatchable” energy sources, meaning they only generate energy when the wind is blowing or the sun is shining, which is out of the utility company’s control. Tr. Vol. 6A (Galli) 113:5-8; Tr. Vol. 7B (Fuller) 18:22-19:8. That constraint makes renewable fuels imperfect replacements for fossil fuels like coal. When they do run, however, renewables are the lowest-cost generation options on the dispatch curve, shifting SPRB coal generation to the right, and decreasing the likelihood that an SPRB coal-fired unit will be dispatched. *See* Section I.C, *supra*. As such, increased use of renewables has contributed to an erosion in demand for coal. [REDACTED]

[REDACTED]

3. Declining coal generation

In addition to plummeting natural gas prices and pro-renewable policies, some witnesses pointed to environmental regulations as a factor increasing the cost of operating coal-fired EGUs in recent years. [REDACTED] plans to retire certain coal-fired EGUs because “there would be significant capital investments that would be required in those units to extend the life and to operate and meet environmental standards”); *see also* [REDACTED]

[REDACTED] Whatever the causes, the operational costs of coal-fired generation have

increased over the past 16 years, relative to other fuel sources. DX4001 (Bailey Report) ¶¶ 18-20. In response to these increasing costs, electricity generators have shifted away from coal by investing in new renewable and natural gas-powered EGUs and idling or permanently retiring their coal EGUs. *Id.*

Between 2010 and the first quarter of 2019, U.S. power companies announced the retirement of at least 546 coal-powered EGUs totaling about 102 gigawatts (GW) of generating capacity. DX8009-001. Plant owners intend to retire another 17 GW of coal-fired capacity by 2025. *Id.* Strikingly, not a single megawatt of coal generating capacity is currently being built or planned in the entire United States. Tr. Vol. 6A (Carey) 46:20-21.

In addition, some plants that are not being retired are being relegated to seasonal operations. For instance, [REDACTED] has retired, idled, or converted to natural gas [REDACTED] coal-fired EGUs, and it is considering retiring its [REDACTED] remaining coal-fired EGUs or shifting to seasonal operations. [REDACTED]

4. Cumulative impact on the coal industry

As a result of these developments, coal is no longer uniformly regarded as the “baseload” generation source that it was when *Arch Coal* was decided. DX4001 (Bailey Report) ¶ 31 (collecting statements from various utilities). Coal-fired EGUs are increasingly “load-following,” meaning that they may or may not dispatch depending on day-to-day changes in the ISO dispatch market. *Id.*

In 2004, coal, including but not limited to SPRB coal, comprised almost 50% of net electricity generation in the United States, while nuclear provided about 20%, natural gas provided about 18%, hydro provided about 7%, and other renewables, including wind and solar, provided about 2%. *Id.* at Ex. 8. In 2019, as a result of the three trends described above, coal’s

share of net electricity generation in the United States had fallen to about 23%, while natural gas generation had leapt to about 38% of net generation and other renewables had climbed from 2% to about 10%. *Id.* Meanwhile, the country's annual net electricity consumption has stayed relatively flat, increasing by less than 15% over that same time period. *Id.* at Ex. 9. These trends represent a clear structural shift away from coal to other fuels, and no party has suggested that coal will ever again be the primary fuel used to generate electricity in the United States.

The overall decline in electricity generation from coal is reflected in SPRB coal production. From a peak of 452 million tons of SPRB coal mined in 2008, aggregate SPRB coal production decreased by over 40% to 267 million tons in 2019. *Id.* ¶ 21. Between 2011 and 2019, Peabody's production at its three SPRB mines (NARM, Caballo, and Rawhide) declined by nearly 30%, from 148 million tons to 108 million tons. *Id.* Likewise, Arch's production at its two SPRB mines (Black Thunder and Coal Creek) declined by 41%, from 128 million tons to 75 million tons. *Id.* These declines can also be seen in customers' SPRB coal deliveries. *Id.* ¶ 22.

As the costs of production have increased and demand has decreased, the price of SPRB coal has declined from \$20 per ton in 2006 to approximately \$12 per ton in 2020. Tr. Vol. 3B (Sandlin) 101:24-102:3. Higher costs of production combined with lower prices have caused profit margins to fall. Arch's profit margin for Black Thunder coal fell from [REDACTED] in 2004 to [REDACTED] in 2019. DX4001 (Bailey Report) ¶ 23. Arch's SPRB margins were negative in each of the first two quarters of 2020. Tr. Vol. 5A (Lang) 77:15-24, 81:20-83:18. Peabody's profits margin for NARM coal declined from [REDACTED] in 2007 to [REDACTED] in 2019. DX4001 (Bailey Report) ¶ 23. Peabody's overall SPRB margins in the first quarter of 2020 were 10%. Tr. Vol. 5A (Kellow) 32:21-24.

The combination of low natural gas prices, increasing use of renewables, structural decline in SPRB coal production, and falling margins has caused numerous SPRB coal producers to declare bankruptcy over the last ten years. JSUF ¶¶ 27-29. In order to cut costs, mining companies have laid off significant fractions of workforces at all SPRB mines in recent years, including in the last several months. DX8698-001; Tr. Vol. 5A (Kellow) 13:14-14:10 (describing recent Peabody layoffs); Tr. Vol. 5A (Lang) 69:8-12 (Arch has gone from 39 coal mines and over 8,000 employees in 2011 to 8 coal mines and 3,400 employees today). One of the witnesses at the hearing had himself retired early as part of Peabody's ongoing force reduction efforts. Tr. Vol. 6A (Galli) 105:16-24.

Given the pace of retirements of coal-powered units and the lack of any plans for new coal-powered units, coal companies perceive any retirement of a coal-powered EGU to be a permanent loss in demand. Tr. Vol. 5A (Kellow) 6:19-7:6 (once a customer decides to retire a coal plant, the associated demand is "lost to coal forever" because "we are not seeing new generation of coal units coming online"). Coal companies therefore have an incentive to work with customers to try to prevent such retirements. Tr. Vol. 6B (Galli) 42:19-45:3 (regarding [REDACTED]); DX4003 (Israel Report) ¶ 123 (collecting examples of Defendants adjusting pricing to forestall coal EGU retirements).

II. The Proposed Joint Venture

Peabody is a publicly traded mining company headquartered in St. Louis, Missouri. JSUF ¶ 2. Peabody describes itself as "the leading global pure-play coal company, serving power and steel customers in more than 25 countries on six continents." PX9010-002. It is the largest producer and supplier of coal from the SPRB. Peabody Answer ¶ 16; PX8001 (Hill Report) ¶ 30. Peabody operates three mines in the SPRB: North Antelope Rochelle ("NARM"),

Rawhide, and Caballo. JSUF ¶ 20. NARM is the largest coal mine in the world, powering approximately 4.5% of total U.S. electricity generation. PX9010-002. In 2019, Peabody sold approximately 108 million tons of SPRB coal: 85.3 million tons from NARM, 12.6 million tons from Caballo, and 10.1 million tons from Rawhide. PX9063-061.

Arch is also a publicly traded mining company headquartered in St. Louis, Missouri. JSUF ¶ 3. Arch also operates two thermal coal mines in the SPRB: Black Thunder and Coal Creek. JSUF ¶ 19. In 2019, Arch sold 72 million tons of SPRB coal from Black Thunder and 2.6 million tons from Coal Creek. PX9055-015. According to the U.S. Energy Information Administration (“EIA”), which defines itself as the “premier source for energy information” in the United States, JSUF ¶ 11, and whose data and reports on power generation both parties cite extensively, Black Thunder is the second most productive mine in the United States, after Peabody’s NARM. PX9041-034.

In addition to Peabody and Arch, five other companies produce coal in the SPRB from seven mines. JSUF ¶ 21. Navajo Transitional Energy Co. (“NTEC”) operates the Antelope and Cordero Rojo mines. *Id.* ¶ 22.⁵ Eagle Specialty Minerals (“Eagle”), an affiliate of FM Coal, operates the Eagle Butte and Belle Ayr mines. *Id.* ¶ 23.⁶ Peter Kiewit Sons, Inc., (“Kiewit”) operates the Buckskin mine. *Id.* ¶ 24. Black Hills Corporation operates the Wyodak mine. *Id.* ¶ 25. The Western Fuels Association (“WFA”) operates the Dry Fork mine. *Id.* ¶ 26.

⁵ Cloud Peak Energy, Inc., (“Cloud Peak”) previously operated the Antelope and Cordero Rojo mines prior to filing for bankruptcy protection in May 2019. *Id.* ¶ 27. NTEC acquired those mines during Cloud Peak’s bankruptcy proceedings.

⁶ Blackjewel, LLC (“Blackjewel”) previously operated the Eagle Butte and Belle Ayr mines. *Id.* ¶ 28. Blackjewel filed for bankruptcy protection in July 2019, resulting in a temporary shutdown of its two mines. *Id.* ¶ 29.

Defendants announced the proposed joint venture on June 19, 2019. *Id.* ¶ 30. If consummated, the JV would combine Peabody and Arch’s PRB and Colorado mining assets. *Id.* The JV would be 66.5% owned by Peabody and 33.5% owned by Arch, *id.* ¶ 31, and Peabody would serve as the JV operator and handle coal marketing for the JV. PX1564-004. The JV would control approximately 65-70% of all SPRB coal produced, PX8001 Fig. 22, and would operate five of the top ten most productive mines in the United States. PX1564-005.

Defendants contend that the JV will combine their Colorado and SPRB mining assets in a “highly synergistic joint venture aimed at strengthening coal’s competitiveness against natural gas and renewables, while creating substantial value for customers and shareholders.” Defendants’ Proposed Findings of Fact and Conclusions of Law (“DPFFCL”) (Doc. [404]) ¶ 50; DX8696-001. The JV would join Peabody’s NARM mine with Arch’s Black Thunder mine into a single mining complex. DPFFCL ¶ 50; DX8696-002. Currently, the two mines neighbor one another but are separated by a seven-mile property line. *Id.*

III. The FTC’s Challenge and Procedural History

On February 25, 2020, the FTC initiated an administrative proceeding challenging the JV under Section 7 of the Clayton Act and Section 5 of the FTC Act. JSUF ¶ 32. The following day, the FTC initiated this litigation, filing a complaint seeking a temporary restraining order (“TRO”) and preliminary injunction blocking the JV pursuant to Section 13(b) of the FTC Act. *Id.* ¶ 33. On February 28th, the FTC and Defendants stipulated to, and this Court ordered, a TRO blocking Defendants from consummating the JV pending this Court’s adjudication of the FTC’s motion for a preliminary injunction. *Id.* ¶ 34.

The parties originally intended to conduct a preliminary injunction hearing in June 2020. Because of delays caused by the ongoing COVID-19 pandemic, that schedule was amended

twice, giving the parties more time to adjust to rapidly evolving health guidelines and public safety risks and to conduct heroic amounts of written discovery and scores of depositions.

Even with those delays, this case was litigated at breakneck speed. Less than five months after the FTC's initial filing in this Court in late February, the parties conducted a nine-day preliminary injunction hearing from July 14th through the 24th, during which the parties admitted hundreds of exhibits and presented testimony from dozens of witnesses.⁷ On August 3rd, the parties filed proposed findings of fact and conclusions of law, and on August 10th, the parties presented their closing arguments to the Court.

LEGAL STANDARD

Section 7 of the Clayton Act prohibits mergers or acquisitions “the effect of [which] may be substantially to lessen competition, or to tend to create a monopoly” in “any line of commerce or in any activity affecting commerce in any section of the country.” 15 U.S.C. § 18. When the FTC has “reason to believe that a corporation is violating, or is about to violate, Section 7 of the Clayton Act,” it may seek a preliminary injunction under Section 13(b) of the FTC Act to “prevent a merger pending the Commission’s administrative adjudication of the merger’s legality.” *F.T.C. v. Staples, Inc.*, 970 F. Supp. 1066, 1070 (D.D.C. 1997) (“*Staples I*”) (citing 15 U.S.C. § 53(b)).⁸

⁷ Due to late-breaking coronavirus-related developments, the preliminary injunction hearing—which involved dozens of attorneys, 24 live witnesses, plus security, Clerk’s Office, and chambers staff over nine court days—nearly had to be held entirely via video conferencing technology. At the eleventh hour, the Eastern District of Missouri Clerk’s Office devised a way to hold it safely with a dozen attorneys and most witnesses appearing in person (scrupulously socially-distanced and masked); several examining attorneys and witnesses appearing by video conference; many more attorneys connected via a secure audio line; and the general public listening in by telephone. It was a staggering logistical and technological challenge, and the Court commends all involved—including attorneys, paralegals, support staff, and courthouse personnel—for their flexibility, resourcefulness, and professionalism.

⁸ A hearing before an administrative law judge is scheduled to begin on December 1, 2020. Counsel for Defendants has represented to the Court that the administrative hearing will never happen, and that Peabody and Arch will abandon the JV if the Court grants a preliminary injunction. The Court has no

The standard for a preliminary injunction described in Section 13(b) of the FTC Act differs from the more familiar preliminary injunction standard applied in other contexts. *F.T.C. v. Sysco Corp.*, 113 F. Supp. 3d 1, 22 (D.D.C. 2015). A preliminary injunction may be granted in an antitrust case if the FTC shows that “weighing the equities and considering the Commission’s likelihood of ultimate success, such action would be in the public interest.” *F.T.C. v. Tenet Health Care Corp.*, 186 F.3d 1045, 1051 (8th Cir. 1999) (quoting 15 U.S.C. § 53(b)). In order to demonstrate such a likelihood of ultimate success, “the FTC must raise questions going to the merits so serious, substantial, difficult and doubtful as to make them fair ground for thorough investigation, study, deliberation and determination by the FTC in the first instance and ultimately by the Court of Appeals.” *F.T.C. v. Freeman Hosp.*, 69 F.3d 260, 267 (8th Cir. 1995) (quotation omitted). “A showing of a fair or tenable chance of success on the merits will not suffice for injunctive relief.” *Tenet Health*, 186 F.3d at 1051 (citing *Freeman Hosp.*, 69 F.3d at 267).

In *United States v. Baker Hughes, Inc.*, 908 F.2d 981, 982–83 (D.C. Cir. 1990), the D.C. Circuit established a burden-shifting framework for evaluating the FTC’s likelihood of success on the merits. The Eighth Circuit has analyzed, endorsed, and applied the *Baker Hughes* burden-shifting framework in the context of an alleged Clayton Act violation. See *F.T.C. v. Sanford Health*, 926 F.3d 959 (8th Cir. 2019). The Eighth Circuit described the framework:

Under this approach, the [FTC] must first present a prima facie case that the merger will result in an undue market concentration for a particular product or service in a particular geographic area. That showing creates a presumption that the merger will substantially lessen competition. The burden of production then shifts to the defendant[s] to rebut the presumption, and, on a sufficient showing, back to the

reason to doubt Counsel’s representation, but Defendants’ intentions do not affect the legal standard that this Court must apply.

[FTC] to present additional evidence of anticompetitive effects. The ultimate burden of persuasion remains at all times with the [FTC].

Id. at 962-63. “The more compelling the prima facie case, the more evidence the defendant must present to rebut it successfully.” *Baker Hughes*, 908 F.2d at 991. “A defendant can make the required showing by affirmatively showing why a given transaction is unlikely to substantially lessen competition, or by discrediting the data underlying the initial presumption in the government’s favor.” *Id.* “[A] failure of proof in any respect will mean the transaction should not be enjoined.” *F.T.C. v. Arch Coal*, 329 F. Supp. 2d 109, 116 (D.D.C. 2004). The court must also weigh the equities, but if the FTC is unable to demonstrate a likelihood of success, the equities alone cannot justify an injunction. *Id.*

DISCUSSION

I. Market Definition

The FTC’s initial burden, then, is to demonstrate that there is a relevant market in which the proposed JV is likely to harm competition relative to the “but-for” world in which there is no JV. *See Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962); *Sanford*, 926 F.3d at 962-63 (describing market definition and burden-shifting framework); Horizontal Merger Guidelines⁹ (“Guidelines”) § 1 (merger analysis normally requires “an assessment of what will likely happen if a merger proceeds as compared to what will likely happen if it does not”); *F.T.C. v. Nat’l Tea Co.*, 603 F.2d 694, 700 (8th Cir. 1979) (“[W]hen examining a merger, a court must necessarily compare what may happen if the merger occurs with what may happen if the merger does not occur.”).

⁹ Both parties cite to the Guidelines, published by the U.S. Department of Justice and the Federal Trade Commission, extensively in their briefing. Although they are not binding, the Guidelines “have [] been repeatedly relied on by the courts” in evaluating merger challenges. *F.T.C. v. Tronox Ltd.*, 332 F. Supp. 3d 187, 206 (D.D.C. 2018).

This initial step is mission-critical for all FTC merger challenges. *United States v. Marine Bancorp.*, 418 U.S. 602, 618 (1974) (Market definition is “‘a necessary predicate’ to deciding whether a merger contravenes the Clayton Act.”) (quoting *United States v. E.I. du Pont De Nemours & Co.*, 353 U.S. 586, 593 (1957)); *Tenet Health*, 186 F.3d at 1051 (“Without a well-defined relevant market, a merger’s effect on competition cannot be evaluated. It is thus essential that the FTC identify a credible relevant market before a preliminary injunction may properly issue.”) (citation omitted); *Freeman Hosp.*, 69 F.3d at 268 (“Without a well-defined relevant market, an examination of a transaction’s competitive effects is without context or meaning.”). This case is no exception. If the FTC does not produce sufficient evidence for its proposed market definition—and satisfactorily address Defendants’ objections thereto—it will be very difficult to justify its request for a preliminary injunction against the JV. *See, e.g., F.T.C. v. RAG-Stiftung et al.*, 2020 WL 532980, at *1 (D.D.C. Feb. 3, 2020) (The FTC’s failure “to properly define a market in terms of both product and geography . . . all but precludes the Court from siding with it.”).

“A relevant market consists of two separate components: a product market and a geographic market.” *Freeman Hosp.*, 69 F.3d at 268. “First, the ‘relevant product market’ identifies the product and services with which the defendants’ products compete. Second, the ‘relevant geographic market’ identifies the geographic area in which the defendant competes in marketing its products or service.” *Arch Coal, Inc.*, 329 F. Supp. 2d at 119; *see also F.T.C. v. CCC Holdings Inc.*, 605 F. Supp. 2d 26, 37 (D.D.C. 2009) (same). In this case, the principal question in the market definition phase is the relevant product market. If the FTC succeeds in defining the product market as SPRB coal, the geographic market follows rather

uncontroversially from that conclusion. Therefore, the Court will focus first on the parties' positions on the relevant product market.

A. Relevant product market

A product market is defined by “the reasonable interchangeability of use or the cross-elasticity of demand between the product itself and substitutes for it.” *Brown Shoe*, 370 U.S. at 325. See also *Process Controls Int’l, Inc. v. Emerson Process Mgmt.*, Case No. 4:10-cv-645-CDP, 2011 WL 403121, at *2 (E.D. Mo. Feb. 1, 2011) (“[T]he relevant product market includes all reasonably interchangeable products.”). In other words, a properly defined product market includes the functionally similar products to which customers could turn if the JV attempted to impose a post-closing price increase. See *Little Rock Cardiology Clinic PA v. Baptist Health*, 591 F.3d 591, 596 (8th Cir. 2009) (noting focus is whether “consumers will shift from one product to the other in response to changes in their relative costs”); *F.T.C. v. R.R. Donnelley & Sons Co.*, Case No. 90-1619-SSH, 1990 WL 193674, at *2 (D.D.C. Aug. 27, 1990) (“If customers are able to substitute one product or service in response to a nontrivial increase in the price of another, these products or services must fall within the same product market.”).

A relevant product market need not be defined around a *single* product. See *United States v. Grinnell Corp.*, 384 U.S. 563, 572 (1966) (“We see no barrier to combining in a single market a number of different products or services where that combination reflects commercial realities.”); *Sysco*, 113 F. Supp. 3d at 26 (“The ‘product’ that comprises the market need not be a discrete good for sale.”); see, e.g., *United States v. Phila. Nat’l Bank*, 374 U.S. 321, 356 (1963). Also, “the mere fact that a firm may be termed a competitor in the overall marketplace does not necessarily require that it be included in the relevant product market for antitrust purposes.” *Staples I*, 970 F. Supp. at 1075. Rather, the critical question is “whether two products can be

used for the same purpose, and if so, whether and to what extent purchasers are willing to substitute one for the other.” *Id.* at 1074 (quotation omitted); *see also Sysco*, 113 F. Supp. 3d at 26 (“[M]arket definition hinges on whether consumers view the products as reasonable substitutes.”) (internal quotation marks and citation omitted).

Here, the FTC insists that the market for SPRB coal satisfies all applicable criteria for a relevant product market. Defendants counter that the electricity industry is so complex and dynamic that the JV cannot reasonably be evaluated in the context of the market for SPRB coal alone. Instead, they urge this Court to define the relevant product market for evaluation of the JV more broadly, to include not only other kinds of coal but also other fuels that compete with coal in the electricity generation market. Resolution of this critical question has been complicated by a recurring theme of this litigation: “There is no industry like the electricity industry.” Tr. Vol. 6A (Carey) 24:8-9. The parties took great pains to educate the Court about the idiosyncrasies of that industry, though, and the Court has done its best to take them into account in its evaluation of their proposed relevant product markets.

Courts have various tools with which to determine whether to adopt the FTC’s proposed relevant product market, including quantitative approaches, such as the hypothetical monopolist test (“HMT”), and qualitative approaches, such as the factors laid out in *Brown Shoe*, 370 U.S. at 325. The parties here have discussed both the HMT and *Brown Shoe*. And both sides have made compelling points in favor of their preferred product markets, as outlined below. Considering all of the evidence, though, both quantitative and qualitative, the Court finds that SPRB coal is the relevant product market in which to evaluate the competitive effects of the proposed JV.

Crucial to the Court’s conclusion is the “narrowest market principle.” A broad product market (e.g., American electricity production) may contain smaller markets (e.g., the markets for

each of the individual sources of fuel or markets consisting of power producers in a certain region) which themselves “constitute [relevant] product markets for antitrust purposes.” *Brown Shoe*, 370 U.S. at 325. If Peabody and Arch compete in multiple product markets, the JV will be illegal under the Clayton Act if it causes substantial competitive harm in *any* of those markets. *United States v. Cont’l Can Co.*, 378 U.S. 441, 458 (1964); *Brown Shoe*, 370 U.S. at 325 (“Because [Section 7] of the Clayton Act prohibits any merger which may substantially lessen competition ‘in any line of commerce,’ it is necessary to examine the effects of a merger in each such economically significant submarket to determine if there is a reasonable probability that the merger will substantially lessen competition.”) (internal citations omitted).

Because competitive harm in *any* relevant product market is enough to make out a prima facie case for violation of the Clayton Act, and because potential harms to competition will likely be less apparent in a broader, less concentrated market than in a narrower included market, this Court’s task is to identify the narrowest market within which the defendant companies compete that qualifies as a relevant product market. *See Times-Picayune Publ’g Co. v. United States*, 345 U.S. 594, 612 n.31 (1953) (“The circle must be drawn narrowly to exclude any other product to which, within reasonable variations in price, only a limited number of buyers will turn.”); *United States v. H&R Block, Inc.*, 833 F. Supp. 2d 36, 58-60 (D.D.C. 2011) (explaining “the principle that the relevant product market should ordinarily be defined as the smallest product market that will satisfy the hypothetical monopolist test”). The prospective merger’s likely competitive effects on *that* market will determine its legality. *See* Guidelines § 4.1.1; *Sysco*, 113 F. Supp. 3d at 26-27; *Arch Coal*, 329 F. Supp. 2d at 120; *Tronox*, 332 F. Supp. 3d at 201-02.

It is indisputable on the record in this case that coal competes with natural gas and renewables in a broader energy market. Still, the FTC has presented more than sufficient

evidence that there is *also* a distinct competitive market among SPRB coal producers that satisfies the applicable criteria for market definition. Because the SPRB coal market satisfies the relevant criteria and is narrower than the energy market writ large, that is the market within which the Court must evaluate the legality of the proposed JV. *Cont'l Can Co.*, 378 U.S. at 458; *Brown Shoe*, 370 U.S. at 325.

In determining the relevant product market for analysis of the proposed JV, the Court has considered the FTC's application of the HMT, the parties' criticisms and defenses thereof, and each of the *Brown Shoe* practical indicia. The Court will address each of these considerations in turn.

1. Hypothetical Monopolist Test

The FTC argues that the HMT, which is “commonly used in antitrust actions to define the relevant market,” *Sanford*, 926 F.3d at 963, demonstrates that the relevant product market here is the market for SPRB coal. PPCL ¶¶ 19-21; *see also* Guidelines § 4.1.1 (The FTC “employ[s] the hypothetical monopolist test to evaluate whether groups of products in candidate markets are sufficiently broad to constitute relevant antitrust markets.”).

The HMT is an analytical method that asks “whether a hypothetical monopolist who has control over the products in an alleged market could profitably raise prices on those products.” *F.T.C. v. Staples, Inc.*, 190 F. Supp. 3d 100, 121 (D.D.C. 2016) (“*Staples II*”). If a firm with a monopoly over the products in a candidate market could profitably impose a small but significant non-transitory increase in price (“SSNIP”), then that market constitutes a relevant product market for antitrust purposes. Guidelines § 4.1.1. Federal agencies, including the FTC, usually use a SSNIP of 5% of prices absent the merger in their analyses of prospective mergers. *Id.*

§ 4.1.2. Neither party has argued that 5% is an inappropriate SSNIP to use in the Court's application of the HMT to the JV.

a. The FTC's HMT analysis

Dr. Nicholas Hill, an antitrust economist, gave expert testimony on behalf of the FTC regarding implementation of the HMT to assess whether SPRB coal is properly defined as the relevant product market for evaluation of the proposed JV. Plaintiff's Proposed Findings of Fact ("PPFF") (Doc. [395]) ¶¶ 38-40; PX8001 (Hill Report) ¶¶ 80-84. Dr. Hill implemented the HMT using the critical elasticity method, Tr. Vol. 4A (Hill) 25:10-13, which he testified is a long-established and well accepted method, Tr. Vol. 9B (Hill) 82:21-83:10. To apply the method, Mr. Hill first calculated the critical elasticity, which is based on industry margins and a 5% SSNIP. PX8001 (Hill Report) ¶ 115; Tr. Vol. 4A (Hill) 26:6-17, 27:2-28:13. Next, Dr. Hill calculated the actual price elasticity of demand for SPRB coal, using standard econometric techniques on real-world data sources. PX8001 (Hill Report) ¶ 114; Tr. Vol. 4A (Hill) 26:18-23, 28:14-25. Finally, Dr. Hill compared the critical elasticity to the actual elasticity: If the actual price elasticity of demand is lower than the critical elasticity, the HMT is satisfied, and the group of products is a properly defined relevant product market for antitrust purposes. PX8001 (Hill Report) ¶ 113; Tr. Vol. 4A (Hill) 29:3-9.

In order to calculate critical elasticity, one must use an industry margin. The parties gave very different estimates of industry SPRB coal margins at the hearing, ranging from negative margins (*i.e.*, Defendants lost money on SPRB coal sales) to margins in excess of 30%. Dr. Hill relied on the average industry variable cost margin based on Defendants' own accounting data. PX8001 (Hill Report) ¶ 250. Dr. Mark Israel, one of Defendants' experts, presented a different margin based on a different categorization of certain costs as variable, decreasing the margin.

Tr. Vol. 9B (Israel) 29:16-20. The FTC argues that Dr. Hill's margin calculations apply a more consistent methodology than Dr. Israel's. PPFF ¶ 45. The Court feels no need to resolve that dispute, because Dr. Hill explained that his methodology, which resulted in a *higher* margin, made the HMT *more* stringent and *more* difficult for the proposed relevant product market to satisfy. Tr. Vol. 4A (Hill) 132:15-133:6. Thus, the use of Dr. Israel's lower margin with the HMT would presumably have yielded results even more strongly supportive of the FTC's proposed market. Moreover, Defendants never argued that a different set of margins would have led to a different outcome on the HMT, so choosing between Dr. Hill's and Dr. Israel's margin calculations would be an academic exercise.

The actual price elasticity of demand is an economic metric for how many sales a product (here, SPRB coal) would lose in response to a small change in price. PX8001 (Hill Report) ¶ 107. It is another signifier of how closely potential substitutes, such as natural gas or other fuels, compete with SPRB coal, in that a higher price elasticity of demand suggests that customers can easily switch to an alternative, whereas a lower elasticity means that customers cannot. *See id.* ¶ 149. Dr. Hill estimated the actual price elasticity of demand for SPRB coal using five different data sets drawn from real-world market sources. *Id.* Fig. 21; PX8006 (Hill Rebuttal Report) Fig. 73; Tr. Vol. 4A (Hill) 30:19-48:8. In all of Dr. Hill's elasticity estimates, the actual price elasticity of demand for SPRB coal was relatively low. PX8001 (Hill Report) ¶ 117. According to the FTC, this finding, which takes into account the competitive pressures from potential substitutes like natural gas, means that customers of SPRB coal, viewed in the aggregate, are likely to continue purchasing SPRB coal in the face of a small increase in price. *Id.* ¶¶ 149-50; Tr. Vol. 4A (Hill) 47:21-49:14. None of Defendants' experts calculated an alternate value for the price elasticity of demand for SPRB coal. Tr. Vol. 9B (Hill) 52:3-11.

Thus, according to the FTC, Dr. Hill’ analysis proves that SPRB coal satisfies the HMT and constitutes the relevant product market in which to consider the legality of the proposed JV.

b. Defendants’ response to the HMT

Defendants assert three objections to Dr. Hill’s analysis of the relevant product market based on the HMT: Dr. Hill’s HMT fails to incorporate the effects of dynamic competition; it contradicts real-world facts; and it is inconsistent with the realities of merit-order dispatch.

i. *Dynamic versus static competition*

First, Defendants argue that Dr. Hill’s HMT analysis is fundamentally flawed because “[t]he electricity generation marketplace is uniquely complex and subject to multiple levels of dynamic competition.” DPFCL ¶ 182. They contend that “dynamic competition and the ever-present risk of coal EGU retirements and resulting permanent loss of SPRB coal demand” would prevent a hypothetical SPRB coal monopolist from increasing SPRB coal prices, thereby risking a permanent reduction in future coal demand. *Id.* ¶ 183.

According to Defendants, “[a] hypothetical SPRB coal monopolist considering a price increase must account not just for short-term potential lost sales volume to other fuels, but also for the coal demand that will be lost due to longer-term changes in generation strategies, including the permanent loss of demand when coal EGUs are retired.” *Id.* ¶ 185. As Defendants’ expert, Dr. Elizabeth Bailey, an antitrust economist at NERA Economic Consulting, explained at the hearing, “if the price of SPRB coal were to go up by a small amount . . . in the short run, that has an effect on utilization or dispatch. And then in the medium and longer run, that has an effect on dynamic substitution, these changes in generation strategies.” Tr. Vol. 7A (Bailey) 29:23-30:3.

In a world with dynamic competition, Defendants argue, competition from natural gas and renewables triggers two types of “bad news” for SPRB coal producers and consumers: (1) declining utilization of coal-powered generation, as ISOs dispatch fewer coal-fired EGUs as a result of relatively cheaper alternative sources of energy; and (2) a decline in wholesale electricity prices, causing all EGUs to be paid a lower market-clearing price when they run. Tr. Vol. 7A (Bailey) 46:18-48:11. These forces mean that if a hypothetical monopolist attempted to increase SPRB coal prices, both short-run and longer-run demand would fall, driving dynamic substitution away from SPRB coal. *Id.*; DPFCL ¶ 187. As described in Section I(D)3, above, such dynamic substitution can take multiple forms: a shift to seasonal operations; entering into power purchase agreements with other electricity generators; accelerating investments in alternative generation sources; accelerating retirement decisions; or retiring a unit immediately and permanently. Tr. Vol. 7A (Bailey) 31:23-32:17. This combination of static and dynamic substitution affects all SPRB coal-powered EGUs, regardless of efficiency. Thus, Defendants claim, even relatively efficient coal-powered EGUs “have made dynamic changes in generation strategy in response to competition from other fuel sources.” DPFCL ¶ 190 (citing Tr. Vol. 7A (Bailey) 50:15-52:7).

As an example of how this dynamic substitution occurs, Defendants point to [REDACTED] [REDACTED] DPFCL ¶ 189. [REDACTED] but as competition from natural gas and subsidized renewables increased, [REDACTED] Tr. Vol. 7A (Bailey) 34:19-35:3. [REDACTED] evaluated a range of options, from buying energy off the grid through power purchase agreements, shifting to seasonal operations, temporarily idling or “mothballing” the plant, and then finally retiring the plant. *Id.* at 35:4-36:1; DX1055-0004

██████████ operating environment has changed drastically over the last several years, transitioning from base load operations to load following, and now reconsidering reserve shut down scenarios. This is largely driven by falling natural gas prices which drive down ERCOT wholesale market prices, ample generation capacity in ERCOT, and the continued growth of renewables in the ERCOT market.”). Arch ██████████ to try to make ██████████ more competitive with *other energy sources*—critically, not in an attempt to undercut competing SPRB coal suppliers or as a result of an RFP. ██████████ While Arch was ultimately unsuccessful and ██████████ Defendants argue that this example shows that they are in close competition with other sources of energy, perhaps even closer competition than they are in with other SPRB coal producers, and that they are highly sensitive to dynamic competition.

Dr. Israel explained that this dynamic competition affects how a rational, profit-maximizing coal producer will operate. DX4003 (Israel Report) ¶¶ 84-130. In a counterfactual coal-only world with only static competition, if the JV raised prices and found that its lost sales rendered the price increase unprofitable, it could lower its prices to regain the market share lost by the earlier price increase. *Id.* ¶ 85. However, in a world with competition from other fuel sources, SPRB coal producers must consider the risk that raising prices would induce customers to accelerate coal EGU retirements, permanently reducing demand and making it impossible to return to the pre-price-increase world simply by lowering prices. *Id.* ¶¶ 86-87. According to Defendants, Dr. Hill’s HMT estimates only the immediate, static substitution caused by shifts in the dispatch curve, which misses longer-term dynamic risks and therefore cannot explain decisions like those made by ██████████ in regard to its ██████████ plant and by Arch in trying to ██████████. DPFFCL ¶ 193. Customers, on the other hand, recognize the reality of

dynamic competition, and use the threat of dynamic substitution to obtain more competitive pricing in RFPs. *Id.*; [REDACTED] (acknowledging that [REDACTED] uses the threat of coal plant retirements or seasonal shutdowns to get better pricing from SPRB coal suppliers).

In rebuttal, Dr. Hill notes that his application of the HMT does capture dynamic substitution of the sort described by Defendants' experts, such as the risk of plant retirement, in his calculation of the price elasticity of demand. Tr. Vol. 9B (Hill) 50:8-13. One of Dr. Hill's estimates of this elasticity was explicitly based on plant closures, *i.e.*, the relationship between SPRB coal prices and the probability of closures of SPRB coal plants. *Id.* at 50:15-18. Dr. Hill concluded that SPRB prices have only a modest impact on plant closures and, therefore, on SPRB demand. PX8006 (Hill Rebuttal Report) ¶¶ 93-94, 174.

Dr. Israel argued that Dr. Hill's plant closure elasticity was flawed because it looked at only the likelihood of retirement in the next year, and the elasticity should be increased (possibly by as much as a factor of 10) to account for the long-run effect of plant closures. Tr. Vol. 9A (Israel) 51:15-52:5. As Dr. Hill explained, however, if there is a price increase in year one, any plants that close are likely to be plants that were already marginal economically, perhaps because of their old age or small size. Tr. Vol. 9B (Hill) 50:22-51:13. If a plant survives the price increase in year one, and the price increase persists, then the surviving plant is relatively unlikely to close in the following years because the fact of its survival in the first year suggests it is a relatively healthier plant. *Id.* Therefore, Dr. Hill contended, multiplying his elasticity based on the prospect of plant closures by a factor of 10 would not yield a more accurate result.

ii. Real-world facts

Defendants also argue that, in addition to failing to account for dynamic competition, Dr. Hill's HMT contradicts real-world facts. DPFCL ¶ 194. Dr. Bailey explained that key

economic indicators for SPRB coal producers, such as margins, prices, and production, belie the FTC’s theory of an oligopoly with increasing concentration. Tr. Vol. 7A (Bailey) 53:5-55:1; DX4001 (Bailey Report) Exs. 11, 19, 23, 43. For instance, her analysis shows that, as production in the SPRB has become more concentrated and the overall number of SPRB coal producers has stayed constant, margins have *fallen*. Tr. Vol. 7A (Bailey) 53:21-54:13; DX4002 (Bailey Rebuttal Report) Exs. 2, 3. According to Dr. Bailey, this means that “the decline that we’re seeing in the profit margins is not being driven by entry or a change in the number of suppliers or what that market structure looks like.” Tr. Vol. 7A (Bailey) 55:20-56:1. Instead, she hypothesizes that the changing price of natural gas can explain these real-world facts. *Id.* at 55:2-19.

Dr. Hill denies that his application of the HMT is in tension with real-world facts. He levels two criticisms at Dr. Bailey’s analysis, both based on the underlying fact that Dr. Bailey’s comparison of SPRB coal margins and the price of natural gas between 2010-2011 (the “high gas price” period) and 2017-2019 (the “low gas price” period) is labeled an “event study” but is in fact not based on any event at all. Tr. Vol. 9B (Hill) 61:8-62:4. First, he argues that the comparison cannot show what caused declining SPRB coal margins. *Id.* For example, between those two time periods, strip ratios increased and new environmental regulations were implemented, both of which would be expected to diminish margins. *Id.* at 62:5-19. Dr. Bailey’s study, which is not centered around any event, offers no insight into what drove down SPRB coal margins during the time periods she selected; rather, it simply shows that SPRB coal margins did in fact decline. In the absence of further evidence, new environmental regulations and increasing strip ratios—both acknowledged by Defendants at the hearing—explain decreasing SPRB coal margins as convincingly as declining natural gas prices.

This conclusion is bolstered by Dr. Hill’s second criticism of Dr. Bailey’s analysis: Because the “event” study lacks an event, there is nothing constraining the analysis to 2010-2011 as a control period for high gas prices. In his rebuttal report, Dr. Hill showed that Dr. Bailey’s purported findings evaporate when her analysis is performed with 2013-2014 as a control period, rather than 2010-2011—even though gas prices were very similar in both years. *Id.* at 62:20-65:3; PX8006 (Hill Rebuttal Report) ¶¶ 121, 124.¹⁰ Meanwhile, between those two time periods, major environmental regulations had begun being implemented, providing a plausible alternative explanation for declining margins. Tr. Vol. 9B (Hill) 64:10-65:3. Rather than conduct a regression analysis to determine how natural gas prices affect SPRB coal margins, Defendants rely on a flawed “event” study that fails to prove that Dr. Hill’s HMT analysis diverges from real-world facts.

iii. Merit-order dispatch

Finally, Defendants’ argue that Dr. Hill’s HMT is inconsistent with the reality of merit-order dispatch. A hypothetical monopolist, they argue, could not successfully impose a SSNIP because ISOs apply merit-order dispatch to decide which EGUs run. Any increase in SPRB coal prices relative to other fuels will result in coal EGUs bidding into the ISO at higher prices and dispatching less frequently. DPFFCL ¶ 200. Therefore, a SSNIP would cause utilities, who want their EGUs to dispatch and therefore get paid, to switch from coal to other fuels—both in the short term by reducing coal burn and purchases and in the long term by shifting electricity generation resources away from coal EGUs toward EGUs powered by other fuels that are likely

¹⁰ Dr. Hill points out in his rebuttal report that Dr. Bailey changed her “Before” and “After” time periods for this analysis between the FTC’s pre-complaint investigatory proceeding and her expert report in this case. PX8006 (Hill Rebuttal Report) ¶¶ 122-23. That shift supports Dr. Hill’s argument that, within a certain range, the time period selected by Dr. Bailey is essentially arbitrary, which casts further doubt on the helpfulness of an event study without an underlying event.

to be dispatched more frequently. *Id.* Defendants called six witnesses responsible for procuring coal (on behalf of Entergy, NIPSCO, NPPD, AEP, Southern Company, and DTE Energy) who testified that they would switch to other fuels if SPRB coal prices increased. *See, e.g.*, Tr. Vol. 7B (Fuller) 23:22-24:16 (explaining how capacity factors at Southern’s various plants affect the company’s fossil fuel procurement strategy).

Against Defendants’ witnesses claiming that they would switch fuel sources if SPRB coal prices rose, the FTC presented seven witnesses stating the opposite. *See, e.g.*, [REDACTED] [REDACTED] purchasing of SPRB coal would not be affected by a 5 percent increase in SPRB coal prices because natural gas still would not be competitive). While the FTC cannot meet its burden by offering evidence from a limited subset of customers, *see R.R. Donnelley*, [1990 WL 193674](#), at *2 (“Isolated segments with isolated customers do not make for a separate product market.”), Defendants have not substantiated their claim that the subset of customers who testified for the FTC “are not representative of the market.” *U.S. v. Englehard*, [126 F.3d 1302, 1306](#) (11th Cir. 1997). Customers representing almost 90% of all SPRB coal sales were subpoenaed in this action, and customers representing over 75% of all SPRB coal sales were deposed. PX8001 (Hill Report) Fig. 42. Customers called by the FTC, including such Fortune 500 heavyweights as Ameren and Xcel, account for about 33% of SPRB coal sales. Tr. Vol. 1A (FTC Opening) 54:22-55:15. Defendants cannot reasonably maintain that the FTC has to call every SPRB coal consumer or prove that not a single one of Defendants’ customers will desert them in the event of a SSNIP. And they provide the Court with no reason to regard the customers called by the FTC as any less representative than the witnesses called by Defendant—or the coal customers whom neither party called, for that matter.

In addition, the FTC has presented factual evidence that customers will accept, and in fact have accepted, price increases in the range of a SSNIP without decreasing their coal purchases. As will be discussed in greater depth in Section II.C, below, the Black Lung Excise Tax (“BLET”), which is a tax paid by coal suppliers but not suppliers of other fuels, increased at the beginning of 2020. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Tr. Vol. 3A (Smith) 16:16-18:1, PX6046 (Galli) 132:23-136:21. Five customers testified that they did not reduce coal burn or consider reducing their future projected coal purchases as a result. PPFF ¶ 141 (collecting testimony). The reason is simple: Utilities “still need the coal to fuel [their] power generating units to supply electricity for [their] customers.” [REDACTED]

This last observation also undermines Defendants’ reliance on *U.S. v. Sabre Corp.*, [2020 WL 1855433](#), at *24 (D. Del. 2020), as an example of a court finding an economic expert’s SSNIP test unpersuasive where the expert relied on an inaccurate assumption that ignored industry realities. *See* DPFFCL ¶ 199. That expert’s SSNIP tests “assume[d] that an airline confronted with a hypothetical price increase has only two choices: pay the increase or walk away.” *Sabre*, [2020 WL 1855433](#), at *24. The court held that that assumption ignored the fact that “airlines also have the ability to withhold consent or not reach a deal” with the hypothetical monopolist and instead try to steer business to other places. *Id.* (internal quotation and citation omitted). The industry in *Sabre* (the airline travel industry) differs from the electricity industry in a critical way: Utilities are *legally obligated* to provide electricity to their customers. *See*,

[REDACTED] They cannot simply choose to “not reach a deal,” *Sabre*,

[2020 WL 1855433](#), at *24, but rather must generate electricity—including from SPRB coal, if their EGUs are designed to burn it—in order to meet those obligations. SPRB coal customers are, to that extent, different from customers in many other industries. The Court will not rely on arguments that “ignore[] industry realities.” *Sabre*, [2020 WL 1855433](#), at *40.

c. Conclusion of HMT analysis

The FTC has presented substantial legal authority supporting the use of the HMT for questions of market definition that are relevantly similar to the one faced by this Court. *See Sanford*, [926 F.3d at 963-64](#); *Tronox*, [332 F. Supp. 3d at 204](#); *Sysco*, [113 F. Supp. 3d at 33-34](#); *H&R Block*, [833 F. Supp. 2d at 51-52](#). Every industry has its idiosyncrasies. Defendants have not persuaded the Court that the energy industry is so different from all other industries that a standard, well-accepted analytical tool like the HMT must be discounted entirely, or that the Court should favor Defendants’ less scientific approach to market definition. Dr. Hill cogently explained his execution of the HMT and persuasively rebutted Defendants’ criticisms of it. And those (ultimately unsuccessful) criticisms of Dr. Hill’s analysis did nothing to undercut the HMT’s usefulness as an analytical tool for determining how to define the relevant product market. *See Sanford*, [926 F.3d at 963](#) (the HMT “is commonly used in antitrust actions to define the relevant market.”) (citing *Saint Alphonsus Med. Ctr.-Nampa Inc. v. St. Luke’s Health Sys., Ltd.*, [778 F.3d 775, 784](#) (9th Cir. 2015)).

2. *Brown Shoe* factors

The HMT is not the only method for determining a relevant product market, however. Following the Supreme Court’s decision in *Brown Shoe*, courts also often consider whether a candidate market is characterized by certain “practical indicia,” including “industry or public recognition of the [market] as a separate economic entity, the product’s peculiar characteristics

and uses, unique production facilities, distinct consumers, distinct prices, sensitivity to price changes, and specialized vendors.” 370 U.S. at 325. These factors are not rigidly applied.¹¹ See *Se. Mo. Hosp. v. C.R. Bard, Inc.*, 642 F.3d 608, 614 (8th Cir. 2011) (“[T]he presence of some [indicia], and absence of others, is not dispositive.”). Ultimately, “the determination of the relevant market . . . is ‘a matter of business reality – [] of how the market is perceived by those who strive for profit in it.’” *Cardinal Health*, 12 F. Supp. 2d at 46 (quoting *F.T.C. v. Coca-Cola Co.*, 641 F.Supp. 1128, 1132 (D.D.C. 1986), *vacated as moot*, 829 F.2d 191 (D.C. Cir. 1987)).

Both sides have argued persuasively that certain *Brown Shoe* factors support the Court’s use of their preferred market. Specifically, Defendants have established that there is robust industry and public recognition of interfuel competition and that the prices for SPRB coal are affected by the prices of other fuels. The FTC, meanwhile, has demonstrated industry recognition of an SPRB coal market, plus it has established that SPRB coal has distinct customers, distinct and desirable characteristics, and unique production facilities. The FTC has even shown that SPRB coal prices are sufficiently distinct to satisfy *Brown Shoe*. On the whole, therefore, although Defendants again remind the Court of the competition between SPRB coal and other fuel sources, they do not undermine the FTC’s argument that the SPRB coal market has the “practical indicia” of a relevant product market. The fact that Defendants’ proposed product market might also satisfy certain *Brown Shoe* factors does nothing to counter the evidence—both quantitative and qualitative—that SPRB coal qualifies as a relevant product market within which to evaluate the effects of the proposed JV.

¹¹ The *Brown Shoe* approach to market definition has been criticized as “free-wheeling,” and out of step with “modern merger practice.” *F.T.C. v. Whole Foods Market, Inc.*, 548 F.3d 1028, 1058-59 (D.C. Cir. 2008) (Kavanaugh, J., dissenting). Nevertheless, it remains good law and is still regularly invoked in antitrust challenges. See, e.g., *RAG-Stiftung*, 436 F. Supp. 3d at 293 n.3 (quoting *Sysco*, 113 F. Supp. 3d at 27 n.2) (“*Brown Shoe* remains the law, and this court cannot ignore its dictates.”)

a. Industry or public recognition

The first *Brown Shoe* factor evaluates how industry participants recognize competitive realities. “The industry or public recognition of the submarket as a separate economic unit matters because we assume that economic actors usually have accurate perceptions of economic realities.” *Rothery Storage & Van Co. v. Atlas Van Lines, Inc.*, 792 F.2d 210, 218 n.4 (D.C. Cir. 1986) (quotation marks omitted). Defendants focused exhaustively on this factor, presenting voluminous evidence reflecting industry assessments that coal is in competition with rival fuels in an expansive energy market. *See* DPFFCL ¶¶ 77-100. The FTC countered with evidence of industry acknowledgment that SPRB coal companies compete principally against each other. *See* PPFF ¶¶ 11-15. Unfortunately for Defendants, the industry recognition arguments presented by the two sides are not mutually exclusive. The Court finds both sides’ narratives to be true.

Defendants provided evidence from four sources showing industry recognition of interfuel competition: the EIA; SPRB coal customers; coal producers; and industry analysts. First, they point out that the EIA has recognized competition among fuels used to generate electricity, explaining that “[t]he competition of coal and natural gas for electricity generation plays an important role in setting wholesale electricity prices.” DX8007-0002; *see also* DX8746-0001 (“The primary driver of [2016] low wholesale electricity prices was the sustained low cost of natural gas, which is the fuel that often determines the marginal generation cost in most power markets.”). The EIA has observed that the increase in natural-gas fired generation has come “largely at the expense of coal-fired generation,” DX8746-0001, and that the “primary driver” in the decline in coal-fired generation is “increased output from natural gas-fired plants and wind turbines.” DX8012-0001. The EIA confirms what Drs. Bailey and Israel explained: A decline in utilization “leads to a decline in revenues at a plant, which generally translates to

lower operating margins, less ability to cover costs, and in many cases, retiring that capacity.” DX8743-0002. Moreover, the EIA predicts that this interfuel competition will continue. *Id.* (“Because of more competitive natural gas prices, more advanced natural gas combined-cycle generators, and the increasing efficiency of the natural gas generator fleet, the EIA expects more coal-fired generators to retire, especially within the next decade.”).

Second, Defendants point to statements from their customers acknowledging competition between SPRB coal and other electricity generation sources. [REDACTED] testified that “[c]oal generation competes against gas every hour of every day.” [REDACTED] [REDACTED] stated that “[t]he decline in coal-fired generation, the decline in coal production, the decline in coal prices have been caused by the energy market, not caused by competition between the coal producers.” [REDACTED] [REDACTED] [REDACTED] testified the “primary source of competition” facing SPRB coal today is “the overall energy market,” including “lower cost alternatives like wind and natural gas, solar, nuclear and hydro.” [REDACTED] And [REDACTED] agreed that “[n]atural gas is by the far the biggest threat to coal demand.” [REDACTED] Defendants were even able to cite testimony from more than half a dozen customers who were called as witnesses by the FTC, acknowledging the competition between natural gas and coal. DPFFCL ¶ 84 (collecting testimony). These statements accord with the reality of merit-order dispatch within ISOs. *See, e.g.*, [REDACTED] (describing how MISO compares EGUs “based on the operating costs of that unit,” regardless of fuel source); *see also* DPFFCL ¶¶ 85-86 (collecting witness statements on the effects of ISO/RTOs on interfuel competition).

In addition to customer testimony, Defendants cite customers' ordinary course documents as evidence that SPRB coal customers recognize the significance of interfuel competition. *See* DPFFCL ¶ 87. For example, NIPSCO's 2018 Integrated Resource Plan ("IRP") states:

The market is currently undergoing change as coal capacity retires and the generation mix shifts toward renewables and natural gas. In recent years, low natural gas prices have resulted in efficient natural gas plants displacing coal-fired generation in the dispatch stack. This dynamic has altered energy prices and has negatively impacted the economics of coal plants.

DX1012-0019. An economic consultant for [REDACTED] stated that one of the "key drivers" of its coal demand forecast was "how the relationship between natural gas and coal commodity prices influences fuel-switching between coal and natural gas." DX2061-0009; *see also* [REDACTED] (discussing DX2061). And in an internal email, an employee of [REDACTED] an SPRB coal customer, stated, "the play here is not coal to coal competition, but really coal versus [natural gas], solar, etc." DX7015-0001; *see also* DX6071 ("I can certainly understand how this gas market is impacting Powder River Basin. We will end the year with surplus inventories at all of our power plants since our plans did not see this low of gas prices in the forecast.").

Third, Defendants cite evidence of coal producers' own recognition of the reality of interfuel competition. *See* DPFFCL ¶ 89. Virtually every employee of Arch or Peabody to testify at the hearing spoke to this competition. *See, e.g.*, Tr. Vol. 3A (Smith) 58:25-59:9; 67:20-68:25; Tr. Vol. 5A (Kellow) 14:15-21. And Defendants submitted evidence that other coal producers, [REDACTED], likewise recognize the significance of competition from other fuel sources, particularly natural gas. *See* DPFFCL ¶¶ 91-93.

The Court recognizes the risk of relying on such testimony, particularly when it comes from Defendants' employees. However, these opinions do not appear to have been concocted for the purposes of this hearing. They are reflected pervasively in Defendants' ordinary course

documents, which “courts often pay close attention to” when determining the relevant product market. *H&R Block*, [833 F. Supp. 2d at 52](#); *see* DPFFCL ¶ 94. Defendants’ ordinary course documents support their testimony that coal producers view other fuels to be their competitors, as well as other SPRB coal producers. *See, e.g.*, DX5004-0007 (“We are also focused on developing creative contract structures to increase burn and to provide our customers cost competitive coal to compete against other alternatives.”); DX6023-0049 [REDACTED]

[REDACTED]

[REDACTED] DX6089-0020

[REDACTED]

[REDACTED]

[REDACTED]; DX6191 [REDACTED]

[REDACTED] DX6078

[REDACTED] DX5022 (“The forward gas curves are so low, that [REDACTED] plans to wait for 2023

purchases.”); DX6073 [REDACTED]

[REDACTED] DX6081 [REDACTED]

[REDACTED]

[REDACTED] DX1040-0001 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Taken together, these ordinary course documents make abundantly clear that SPRB coal producers, including Defendants, take themselves to be competing in the energy marketplace

with other fuels, especially natural gas. *Contrast United States v. Aetna*, 240 F. Supp. 3d 1, 44-45 (D.D.C. 2017) (regular course documents showed that each merging party viewed the other as their greatest competition); *H&R Block*, 833 F. Supp. 2d at 52-54 (same).

Finally, Defendants point to the fact that industry analysts recognize that other fuels used to generate electricity are a competitive constraint on SPRB coal. *See* DPFFCL ¶¶ 95-100. One industry observer, [REDACTED] found that “PRB coal is . . . greatly challenged by wind and natural gas competition,” and that “[n]atural gas is by far the biggest threat to coal demand” and “has displaced hundreds of millions of [tons of] annual coal demand,” DX1501-0009,-0018. [REDACTED] further reported that it was “seeing a tight relation to coal burn and natgas prices. Even the small pickup in natgas pricing last week resulted in a pickup in coal burn. Therefore, the dismal outlook is very much predicated on natural gas prices. Any lift in natgas prices would temper this, but that does not appear likely.” DX1001-0002. And numerous other industry observers have made similar observations. DX8003 (IHS Markit); [REDACTED] DX8033 (PA Consulting); DX1002 (S&P Global Platts); DX5146 (S&P Global Market Intelligence).

The FTC spills somewhat less ink on the “industry recognition” prong of the *Brown Shoe* analysis, but the Commission still points to ample evidence that industry actors treat the SPRB coal market as a distinct submarket. For example, the FTC demonstrates that Defendants themselves study and analyze SPRB coal as a distinct commodity, citing high-level documents tracking and discussing SPRB production, supply and demand, and market shares separately from other coal sources and other energy sources. *See* PPFF ¶ 11 (collecting sources). They point out that Defendants track SPRB sales opportunities and SPRB RFPs separately from other non-coal fuels and fuel basins. *Id.* ¶¶ 12-13 (collecting sources). And the FTC points to

examples of industry analysts and the EIA discussing SPRB-specific market dynamics and price predictions. *Id.* ¶¶ 14-15 (collecting sources).

The FTC's lower-key approach to this factor reflects an aspect of market definition that is easy to forget in the point-counterpoint of litigation—that the FTC does not have to *disprove* Defendants' theory of the relevant product market. It has to show only that the SPRB coal market satisfies the criteria for a relevant product market. *See Brown Shoe*, 370 U.S. at 325. There may also be *other* product markets in which the JV's effects would be less harmful or even innocuous; that would not undermine the viability of SPRB coal as a relevant product market for the purpose of antitrust analysis, particularly if the SPRB coal market is narrower than those rival candidates. *See H&R Block*, 833 F. Supp. 2d at 58-60. In other words, market definition is not a zero-sum game; each proposed relevant product market stands or falls on its own merits, and the narrowest market principle determines which of the qualifying markets a court should use for the rest of its merger analysis. *See Brown Shoe*, 370 U.S. at 325. Therefore, the FTC does not have to be concerned (at least at the market definition phase) with disproving Defendants' claim that SPRB coal competes with natural gas and other fuels in a broader energy market. True or not, it does not affect whether the market for SPRB coal qualifies as a relevant product market under applicable standards and precedents.

Based on the evidence of industry recognition produced by both sides, there is little doubt that SPRB coal providers compete *both* among themselves in a market for SPRB coal *and* against other fuels in a broader market for electricity generation. Therefore, both sides' proposed market definitions satisfy the industry recognition prong of the *Brown Shoe* analysis.

b. Distinct prices

Defendants have provided compelling anecdotal and statistical evidence that SPRB coal prices are closely related to the price of other fuels, and particularly natural gas. On the other hand, the FTC’s economic analysis of the SPRB market, discussed above, demonstrates that demand for SPRB coal is relatively inelastic, and that SPRB coal-reliant power producers are relatively insensitive to price increases. Thus, again, both sides invoke this factor in support of their positions. Unlike the industry recognition prong, though, the strength of Defendants’ argument here does actually detract from the strength of the FTC’s. Still, the FTC has produced sufficient evidence that its proposed relevant product market, SPRB coal, satisfies this prong.

Supporting Defendants’ view, the Court heard uncontested testimony that Defendants set the prices that form the basis of their RFP negotiations, in part, based on natural gas prices. Peabody’s price-setting process includes a Market and Pricing Committee (“MPC”) that recommends SPRB coal price changes based in large part on the forecasted price of natural gas. *See* DPFFCL ¶¶ 36-37; Tr. Vol. 6B (Galli) 14:23-16:10, 17:6-20; 18:2-14; 19:14-25; 21:12-23:15. Defense witness Bryan Galli, who had sat on Peabody’s Market and Pricing Steering Committee (“MPSC”), which reviews the MPC’s recommendations, testified that that body analyzes natural gas prices and forwards in every meeting. Tr. Vol. 6B (Galli) 21:22-22:2. He gave two examples from the past year alone—in September 2019 and March 2020—when Peabody reduced its SPRB coal prices in response to falling natural gas prices. *Id.* at 17:6-18:1; 21:12-23:15.

Similarly, the Court heard evidence that “two main things” Arch considers in pricing its SPRB coal are [REDACTED] Tr. Vol. 5A (Lang) 103:17-24; *see also* Tr. Vol. 3A (Smith) 58:25-59:9 (testifying that the natural gas price is “the very first

thing” in Arch’s weekly Domestic Thermal Updates because [REDACTED]

[REDACTED]

SPRB coal consumers recognize that low natural gas prices affect SPRB coal demand and prices. Defendants cite a cavalcade of customers who admit to considering other fuel prices, including natural gas prices, when determining how much coal to purchase and when to issue a coal RFP. *See* DPFFCL ¶ 112; Tr. Vol. 1B (Meyer) 32:25-33:20; [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Tr. Vol. 7B (Fuller) 22:3-23:3. Defendants also elicited testimony from both suppliers and customers of SPRB coal showing that they evaluate coal prices in direct comparison to natural gas prices, informing fuel purchasing decisions and resource planning. *See, e.g.,* [REDACTED]

[REDACTED]

The FTC counters with evidence that SPRB coal’s prices are distinct from the prices of other fuels. First, it points to industry reports that track SPRB coal prices separately from prices of other types of coal and other non-coal fuel sources. *See* PX9026-002; PX4775-0130-31, Fig. 8-11 (study projecting PRB coal pricing less than half of other coals as far out as 2040); PX8001 (Hill Report) ¶ 91; *see also Tronox*, [332 F. Supp. 3d at 200-01](#) (distinct prices and consistent market share for chloride titanium dioxide relative to sulfate titanium dioxide supported a finding of a separate market). It also notes that SPRB coal has different production costs and different supply and demand influences from non-coal fuels. In reference to natural gas in particular, the FTC points out that “natural gas is a byproduct of crude oil extraction, so oil market dynamics impact significant amounts of supply,” and “[n]atural gas prices are also influenced by demand

for natural gas used to heat homes in winter.” PX8001 (Hill Report) ¶ 91 (relying on EIA publications); PX9188; PX9189; PX6006 (Kellow) IH Tr. 165:1-167:1.

The FTC also argues that the relationship between natural gas price assumptions and MPC prices is not as tight as Defendants would have the Court believe. Although Mr. Galli’s testimony was compelling, it paints an incomplete picture. Dr. Hill plotted the relationship between Peabody’s natural gas price assumptions and MPC prices from May 2015 through November 2019 based on data provided by Peabody through Dr. Israel. PX8006 (Hill Rebuttal Report) Fig. 63. While the two figures tracked each other closely from May 2015 through approximately January 2016, they then began to diverge, with natural gas continuing to fall roughly another 20% from its January 2016 levels, while MPC prices fell only slightly. *Id.* There was intense competition with natural gas throughout that time period, and as described above, Peabody ended up cutting MPC prices twice within the last year. Still, the fact that Peabody was willing and able to hold the line on prices for three years, despite ever-lower natural gas prices, suggests that the relationship between natural gas prices and MPC prices—and therefore the relationship between natural gas prices and SPRB coal prices—is not as tight as Defendants have characterized it.

But the core of the FTC’s argument—a refrain that the FTC has sounded over and over throughout the litigation—is that SPRB coal prices are set through *SPRB-specific* competitive interactions among *SPRB suppliers*. *See, e.g.*, PPFF ¶¶ 17-18. The Court heard a great deal of testimony from SPRB coal customers about the RFP and contracting process, by which SPRB coal is usually procured. *See* [REDACTED]

[REDACTED] PPFF ¶ 18 (collecting customer testimony). The FTC cites customer testimony that only SPRB suppliers are invited to participate in RFPs for SPRB coal.

See PPFF ¶ 20. And it points out, based on Defendants' own documents and testimony, that when Defendants analyze their competition for bids to SPRB customers, they compare their own bids to other SPRB suppliers—without reference to natural gas suppliers or other non-coal suppliers. *Id.* ¶ 21. Finally, the FTC attests that SPRB coal suppliers recognize that, when they receive an RFP for SPRB coal, they are competing against other SPRB coal suppliers. [REDACTED]

[REDACTED] The FTC argues that this RFP process, and not the price of natural gas, determines coal prices. *See, e.g., Staples II*, 190 F. Supp. 3d at 119 (RFPs for multi-year contracts supports finding of distinct prices).

This question—i.e., what determines the price that customers pay for SPRB coal—has been the most hotly contested issue in this litigation. As described above, Peabody's witnesses persuasively testified that the MPC and MPSC [REDACTED]

[REDACTED] taking into account, among other things, the price of natural gas, and that [REDACTED]

[REDACTED] Tr. Vol. 6B (Galli) 16:22-17:20, 23:16-23, 26:6-20, 27:20-28:13. Yet, the FTC presented droves of documents and testimony suggesting that the RFP process puts SPRB coal suppliers—and most often, Arch and Peabody—into head-to-head competition with one another. That is the competition they contend would be lost if the JV goes forward.

Once again, both parties' narratives ring true. The fact that a significant amount of the price variation for SPRB coal over the past several years is attributable to rapidly changing gas prices does not rule out the possibility that some remaining amount of price variation is attributable to head-to-head competition among coal providers. It also does not rule out the possibility that the loss of that remaining variation could constitute a cognizable harm to

competition in a relevant product market. In fact, the price of natural gas could be the most powerful driver of coal prices by a wide margin, and it could still be the case that there is enough head-to-head competition between SPRB coal producers for those producers to constitute a distinct product market. Thus, while Defendants effectively presented their case, they did not refute the FTC's—especially given the evidence that a 5% increase in the price of SPRB coal would not drive customers to purchase an alternative fuel source and [REDACTED]

[REDACTED] See Section II.C, *infra*. This Court therefore finds that, however powerful the effect of natural gas prices on the prices of SPRB coal, the evidence suggests that there is still room for enough non-natural-gas-related variation to characterize SPRB coal prices as “distinct.”

c. Distinct customers

The parties take differing approaches to this factor. Defendants point out that no SPRB coal customers who participated in this proceeding generate electricity exclusively from SPRB coal. Instead, the record shows that customers who purchase SPRB coal also procure other fuels to generate electricity. DPFFCL ¶ 104; DX2049-0003 (“Southern Company Fuel Diversity: ‘All Arrows in the Quiver’”); Tr. Vol. 3B (Sandlin) 110:8-17 (agreeing that WFA believes all generation resources are important). In addition to purchasing other fuels to generate power, utilities also have the option to purchase power from electricity markets if it is more cost-effective than generating power themselves. *See, e.g.*, Tr. Vol. 2B (Ruhl) 85:10-86:2, 86:23-87:11 (OPPD has purchased power from the market when it was more economic to do so); Tr. Vol. 7B (Fuller) 10:11-20 (Southern purchases electricity on wholesale power market when it is cheaper than to generate it itself); [REDACTED]

[REDACTED] DPFFCL ¶ 106.

The FTC counters that SPRB coal has distinct customers with distinct needs because it is bought by utilities with SPRB-fueled power plants, which are long-lived, expensive, and configured for SPRB coal's distinct characteristics (discussed further below). *See* PPFF ¶ 35. Virtually no one other than an owner of an SPRB coal-fired power plant buys SPRB coal, and conversely, an owner of an SPRB coal-fired EGU can only buy SPRB coal for that unit. Such plants cannot easily switch to using other types of coal or other non-fuel coal sources without costly modifications, higher costs, or inefficiencies. *Id.* (collecting statements).

The FTC's interpretation is the correct one. The fact that SPRB coal customers also purchase resources other than SPRB coal to generate electricity does not mean that SPRB coal companies do not have *distinct* customers; it means that they don't have *exclusive* customers, which is not at issue. By Defendants' logic, markets would have to be incomprehensibly large to qualify as relevant product markets for antitrust analysis, which would in turn defeat the whole enterprise. All humans eat more than one type of food, but that does not mean that no particular kind of food has a distinct customer base. Put differently, the customer base for tofu burgers is no less distinct because the same customers also eat kale. And "all food" would not be a useful market for antitrust analysis. *See H&R Block*, 833 F. Supp. 2d at 59 (rejecting a proposed market of all methods of tax preparation because it left "no conceivable alternatives besides going to jail, fleeing to Canada, or not earning any taxable income," which would cause "the usual tools of antitrust analysis—such as the hypothetical monopolist test—[to] cease being useful because it is self-evident that a monopolist . . . in that situation could essentially name any price since taxpayers would have no alternative but to pay it").

SPRB coal-fired EGUs are distinctive power plants with very specific requirements. PX7011 ¶ 11 ("██████████ has explored the use of coals from basins outside the PRB,

such as Illinois Basin coal, but the operational and environmental compliance risks, the major permit amendment requirements, and the potentially higher cost of coal and railroad transportation make the use of Illinois Basin coal uneconomic.”); Tr. Vol. 2A (Peterson) 42:25-43:10 (Evergy estimated that it would cost over \$100 million and require up to four years to convert one of its generating stations from coal to natural gas); *see also Aetna*, 240 F. Supp. 3d at 26-28 (evidence showing customers have “durable preference” for one product and are unlikely to switch supports finding of distinct customers). Short of shutting down a plant (which is not an immediate option for utilities with load-carrying obligations), utilities with SPRB coal plants require a distinct input—controlled overwhelmingly by Defendants—in order to operate. *See Whole Foods*, 543 F.3d at 1039 (a core group of “particularly dedicated” customers may support a finding of a relevant market when “particular circumstances dictate that a product ‘is the only realistic choice’”) (quoting *SuperTurf, Inc. v. Monsanto Co.*, 660 F.2d 1275, 1278 (8th Cir. 1981)). At the same time, no entity *other than* an electricity-generating utility with a SPRB-coal-fired EGU would have any use for SPRB coal. Therefore, there are distinct customers for SPRB coal.

d. Distinct characteristics

The FTC has presented extensive evidence that SPRB coal has distinct and desirable properties relative to other coals and other fuels more generally. *See generally* PPFF ¶¶ 24-34. Because SPRB coal sits in thick beds close to the surface of the earth, SPRB mines are more cost effective than mines in other U.S. coal basins. PX2758-013; PX9168-001. SPRB coal also has low sulfur, sodium, and ash contents relative to other coals. PPFF ¶¶ 25-27; PX9038-001; Tr. Vol. 1B (Meyer) 20:1-19 (Ameren solicits bids for what it calls “ultra-low sulfur” coals to remain compliant with emissions standards); [REDACTED]

PX8001 (Hill Report) ¶ 94 n.227. SPRB coal also has a specific heat content, typically in the 8,400-8,800 Btu range. PPFF ¶ 29; PX8001 (Hill Report) ¶ 96.

SPRB coal customers consistently testified that they value SPRB coal because of its distinctive properties. *See* PPF ¶ 28; *see, e.g.*, [REDACTED] values ultra-low sulfur coal and has even rejected the lowest-price bid from Eagle Butte in favor of higher priced offerings that met its sulfur needs); Tr. Vol. 2B (Romer) 96:4-7 (Xcel sources SPRB coal to generate power because “our boilers were designed for [SPRB coal]”); [REDACTED] plants burn only SPRB coal because SPRB coal “has the characteristics that the units were designed for.”); [REDACTED] coal-fired units are designed to burn low sulfur PRB coal); Tr. Vol. 2A (Peterson) 34:10-35:6 (SPRB coal works best in Evergy’s coal-fired generating units because of its sulfur dioxide, sodium and ash content); [REDACTED] does not purchase coal from the Illinois basin because of its higher sulfur and sodium). Failure to use SPRB coal can result in operational issues and harm to boilers. Tr. Vol. 8A (Benham) 72:19-73:8 (SPRB coal is important to Minnesota Power’s generation because higher sodium content in NPRB coal can plug boilers); Tr. Vol. 2B (Ruhl) 20:3-11 (SPRB coal is typically between 8,300 to 8,900 Btu, which OPPD can burn in its coal-fired units).

SPRB customers also testified that they see the ability to stockpile SPRB coal as an advantage over alternative fuels. PPFF ¶ 30; Tr. Vol. 3B (Sandlin) 125:9-126:4 (the ability to stockpile and “survive off [] inventory piles for a while” is an advantage of coal); *see also* Tr. Vol. 2B (Romer) 96:4-7 (describing ready availability as a reason why Xcel sources SPRB coal to generate power). Natural gas cannot be stockpiled, leaving power producers at risk of interruptions due to frozen pipelines or capacity constraints during periods of high demand. *See*

[REDACTED] (the ability to stockpile is an advantage of coal over natural gas); [REDACTED] (“Natural gas has restrictions on delivery in winter, capacity restrictions in winter months, like the recent polar vortex, and therefore, the natural gas could not get delivered to our—our combined-cycle gas plants. With coal, we store coal on the ground, so we always know we’re reliable. That’s the backbone of our reliability to our customers and to the market because we already have the energy on-site, ready to be used.”). Renewable energy sources also cannot be stockpiled and are subject to natural fluctuations in sunlight, wind, or precipitation. *See* Tr. Vol. 3B (Sandlin) 93:23-94:18 (power plants fueled by wind were unable to run during the polar vortex while coal plants were able to run and supply electricity); Tr. Vol. 1B (Jones) 81:12-24 (SPRB coal-fired capacity is more valuable than the same amount of wind capacity because coal is reliable and wind is intermittent). And transmission constraints affect the availability of wind energy. Tr. Vol. 2A (Peterson) 43:13-44:6 (testifying that wind is not a reliable source of energy for Evergy because the wind does not always blow, and transmission can become constrained).

Defendants made little effort to dispute the plain fact that SPRB coal has the above distinct characteristics. Therefore, the Court has no trouble finding that the SPRB coal market satisfies this factor of the *Brown Shoe* analysis.

e. Unique production facilities

It is even easier for the FTC to satisfy the “unique production facilities” prong of *Brown Shoe*. Only coal suppliers operating in the SPRB produce SPRB coal. JSUF ¶¶ 17-21. SPRB coal suppliers’ production facilities—i.e., coal mines and related processing facilities—are entirely different from facilities related to the production of natural gas or other fuels. *Compare* PX6031 (Gurgenli) 42:4-23 (describing surface coal mining), *and* PX9168-0001-03 (EIA article

on mining and transportation of coal) *and* PX8001 (Hill Report) ¶¶ 24-26, *with* PX8001 (Hill Report) ¶ 71 (describing production and transportation of natural gas). Defendants do not deny these obvious facts.

f. Conclusion of *Brown Shoe* analysis

Defendants have established that there is industry and public recognition of a broader energy market and that SPRB coal prices are, to some extent, related to natural gas prices. But their success does not entail the FTC's failure. On the contrary, the FTC has established not just industry recognition of a distinct SPRB coal market, but also that SPRB coal has distinct and desirable characteristics, distinct customers, and unique production facilities. And while the strength of Defendants' showing of the relationship between the prices for natural gas and SPRB coal does weaken somewhat the FTC's claim that SPRB coal has "distinct prices," the Court finds that the FTC produced enough evidence to satisfy that *Brown Shoe* factor as well.

3. Conclusion: SPRB coal is a relevant product market.

The FTC has presented both economic analysis (in the form of the HMT) and practical evidence that the SPRB is a relevant product market under traditional antitrust analytical methods and precedents. That is all they needed to do to justify the Court analyzing the effects of the proposed JV in that market, and they accomplished it. *See Cont'l Can Co.*, [378 U.S. at 458](#).

The Court is persuaded that there is meaningful competition between SPRB coal and other sources of fuel used to generate electricity, and that the cost of natural gas influences the price of SPRB coal. Ultimately, though, Defendants' arguments do not cohere into a powerful enough case to persuade the Court to ignore both the narrowest market principle and the standard analytical and economic tools provided by the FTC, which overwhelmingly support the existence

of a distinct market for SPRB coal in which consumers likely would be forced to accept a SSNIP.

For the foregoing reasons, the Court finds that there is an “economically significant submarket” of SPRB coal only. *Brown Shoe*, 370 U.S. at 325. The Court will conduct the remainder of its analysis of the proposed JV in the context of that market.

B. Relevant geographic market

The second half of market definition is to determine the relevant geographic market. *Sysco*, 113 F. Supp. 3d at 48. The Supreme Court has stated that, for Section 7 of the Clayton Act, the relevant geographic market is “the area in which the goods or services at issue are marketed to a significant degree by the acquired firm.” *Marine Bancorp.*, 418 U.S. at 620-21. Stated differently, “[t]he proper question to be asked . . . [is] where, within the area of competitive overlap, the effect of the merger on competition will be direct and immediate.” *Phila. Nat’l Bank*, 374 U.S. at 357; *see also Cardinal Health*, 12 F. Supp. 2d at 49 (citation omitted) (internal quotation marks omitted) (stating that the relevant geographic market is “the area to which consumers can practically turn for alternative sources of the product and in which the antitrust defendants face competition”). Like the product market, the geographic market must “correspond to the commercial realities of the industry and be economically significant.” *Brown Shoe*, 370 U.S. at 336-37 (footnote omitted) (internal quotation marks omitted).

SPRB coal supplier mines are located exclusively within the Southern Powder River Basin near Gillette, Wyoming. PX8001 (Hill Report) Fig. 2. SPRB coal cannot be mined outside the SPRB, *id.* ¶ 87, and customers cannot purchase SPRB coal from any mines outside of the SPRB. [REDACTED] Tr. Vol. 2B (Ruhl) 10:14-17. By finding the SPRB coal market to be the relevant product market, then, the Court has effectively also defined the

relevant geographic market. Defendants have not argued otherwise. Accordingly, the Court finds that the SPRB is the relevant geographic market.

II. FTC’s Prima Facie Case for Likelihood of Anticompetitive Effects

Having found that the FTC has carried its burden of establishing a relevant market for SPRB coal, the Court turns next to “the likely effects of the proposed [JV] on competition within that market.” *F.T.C. v. Swedish Match*, 131 F. Supp. 2d 151, 166 (D.D.C. 2000). “If the FTC can make a prima facie showing that the [JV] will result in a significant market share and an undue increase in concentration” in the relevant market, then “a presumption is established that [the JV] will substantially lessen competition.” *Id.*; *see also Phila. Nat’l Bank*, 374 U.S. at 363 (“[A] merger which produces a firm controlling an undue percentage share of the relevant market, and results in a significant increase in the concentration of firms in that market is so inherently likely to lessen competition substantially that it must be enjoined in the absence of evidence clearly showing that the merger is not likely to have such anticompetitive effects.”).

“Market concentration is a function of the number of firms in a market and their respective market shares.” *Arch Coal*, 329 F. Supp. 2d at 123. A common tool used to measure changes in market concentration is the Herfindahl–Hirschmann Index (HHI). *F.T.C. v. H. J. Heinz*, 246 F.3d 708, 716 (D.C. Cir. 2001); *see also* Guidelines § 5.3. HHI figures are “calculated by summing the squares of the individual firms’ market shares,” a calculation that “gives proportionately greater weight to the larger market shares.” Guidelines § 5.3. “Sufficiently large HHI figures establish the FTC’s prima facie case that a merger is anticompetitive.” *Heinz*, 246 F.3d at 716.

In support of its prima facie case, the FTC makes a market share argument based on the HHI, which it then supports with evidence of head-to-head competition between Peabody and

Arch; evidence that SPRB coal customers would not be able to protect themselves from a price increase; and an argument that just such a price increase is likely from the proposed JV.

A. Market share calculation

The Merger Guidelines, which provide “a useful illustration of the application of HHI,” *F.T.C. v. PPG Indus., Inc.*, 798 F.2d 1500, 1503 n.4 (D.C. Cir. 1986), state that a market with an HHI above 2,500 is considered “highly concentrated”; a market with an HHI between 1,500 and 2,500 is considered “moderately concentrated”; and a market with an HHI below 1,500 is considered “unconcentrated,” Guidelines § 5.3. Also according to the Guidelines, mergers that result in “highly concentrated markets that involve an increase in the HHI of more than 200 points will be presumed to be likely to enhance market power.” *Id.* In *Heinz*, for example, the D.C. Circuit held that an increase in HHI by 510 points “creates, by a wide margin, a presumption that the merger will lessen competition.” 246 F.3d at 716.

Dr. Hill calculated that Peabody and Arch have a combined market share of 68% when measured by production volumes. PX8001 (Hill Report) Fig. 22. Dr. Hill’s calculation is consistent with Peabody’s ordinary-course documents, *see, e.g.*, PX1681-007; PX1141-004, and documents from third parties, *see* PX5536-001; PX3021-001; PX5535-001. Dr. Hill calculated market shares and the HHI using 2019 mine production data, and he found that the JV will increase the SPRB coal market’s HHI by 2,258 points, from 2,707 to 4,965. PX8001 (Hill Report) Fig. 22, ¶¶ 155, 158. In other words, the JV would take an already “highly concentrated” market—at 2,707—and make it *far* more concentrated by *nearly doubling* its HHI—to 4,965. The increase of 2,258 points is fully *four times* the increase that the D.C. Circuit deemed to have created a presumption of anti-competitive effects “by a wide margin.” *Heinz*, 246 F.3d at 716. Dr. Hill performed the same calculations based on HHI figures in all years

from 2008 to present, and the JV would have been presumptively illegal in every one of those years. PX8001 (Hill Report) ¶ 160 and Fig. 24.

Tellingly, Defendants’ experts do not contest the accuracy of Dr. Hill’s calculations of market share or market concentration. PPFF ¶ 65. Even more here than in *Heinz*, then, the HHI calculation “creates, by a wide margin, a presumption that the merger will lessen competition.” 246 F.3d at 716.

B. Head-to-head competition

“Courts have recognized that a merger that eliminates head-to-head competition between close competitors can result in a substantial lessening of competition.” *Sysco*, 113 F. Supp. 3d at 61; *see also Heinz*, 246 F.3d at 717-19 (holding that elimination of competition between second- and third-largest jarred baby food manufacturers would weaken competition); *Swedish Match*, 131 F. Supp. 2d at 169 (finding a likelihood of unilateral price increase where merger would eliminate one of Swedish Match’s “primary direct competitors”); *Staples I*, 970 F. Supp. at 1083 (finding anticompetitive effects where the “merger would eliminate significant head-to-head competition between the two lowest cost and lowest priced firms in the . . . market.”); Guidelines § 6 (“The elimination of competition between two firms that results from their merger may alone constitute a substantial lessening of competition.”). In such circumstances, a merger “is likely to have unilateral anticompetitive effect if the acquiring firm will have the incentive to raise prices or reduce quality after the acquisition, independent of competitive responses from other firms.” *H&R Block*, 833 F. Supp. 2d at 81.

There is extensive evidence in the record that SPRB coal customers benefit from head-to-head competition between Peabody and Arch. *See* PPFF ¶¶ 70-71; PX2376-001 [REDACTED]

[REDACTED] The

parties' own bidding databases, as well as shipment data maintained by the EIA, show [REDACTED]
 [REDACTED] See PX8001 (Hill Report) ¶¶ 169-78, Figs. 25-28. Those lost business opportunities are reflected in the parties' ordinary course documents describing customer negotiations in response to competing bids from each other. See PPFF ¶¶ 76-77 (collecting sources).

Some of this head-to-head competition manifests as competitive bidding through the RFP process. Tr. Vol. 5B (Lang) 17:8-11 (agreeing that, "in general," "the price that Arch receives for SPRB coal is determined by negotiations between Arch and its customers"). At the hearing, Mr. David James, a Peabody Director of Sales & Marketing, and Mr. Rowdy Smith, Arch's Senior Vice President of Domestic Thermal Coal, discussed several examples in which the offers provided by competing SPRB coal suppliers, including from Peabody and Arch, affected negotiations with potential buyers of their SPRB coal. PPFF ¶¶ 79-81. Similarly, customers called by both sides testified to specific instances where they benefited from competition through the RFP process and secured more advantageous pricing. *Id.* ¶¶ 82-87, 89, 91-92 (collecting testimony from representatives of [REDACTED]

[REDACTED] Other customers did not testify to specific instances of competition but spoke more generally from their business experience of the value they perceive from a competitive bidding process. *Id.* ¶¶ 88, 93-97 (collecting testimony from representatives of [REDACTED]

[REDACTED] Other evidence shows that customers benefit on non-price terms (*e.g.*, volume flexibility, which allows a customer to bring forward or push back SPRB coal deliveries based on expected versus actual demand) because of head-to-head competition between Peabody and Arch. *Id.* ¶¶ 98-101.

C. Customers' inability to protect themselves from a price increase

A number of FTC's SPRB coal customer witnesses testified that they could not protect themselves against an SPRB coal price increase. For instance, a representative of [REDACTED] testified that it would continue buying SPRB coal for its coal units even if the mine-mouth price for SPRB coal increased by 10 percent because its units would still be profitable, but the higher prices for SPRB coal would mean that ratepayers would ultimately pay a higher price. PPFF ¶ 102; [REDACTED] A representative of [REDACTED] testified that it would not stop purchasing SPRB coal if prices increased by 5 percent because it lacks enough generating capacity from all other forms of power to meet its obligations without SPRB coal. PPFF ¶ 103; [REDACTED] A representative of [REDACTED] testified that it would not switch to fuels other than SPRB coal if prices increased by 5 percent because its EGUs are designed to burn SPRB coal. PPFF ¶ 104; [REDACTED] Other customers provided similar testimony. PPFF ¶¶ 105-09.

In response to the FTC's impressive showing, Defendants point to the testimony of one customer who reluctantly conceded counsel's assertion that "there is some negotiating power in the hands of the coal consumers," [REDACTED] and one letter from an economic consultant containing a single sentence to the effect that, due to [REDACTED]

[REDACTED] Based on that evidence alone, Defendants ask the Court to find that coal purchasers are sufficiently sophisticated entities to resist a price increase, even from an entity that controls a two-thirds share of the SPRB coal market. *See* DPFFCL ¶ 233 (quoting *Gen. Dynamics*, 341 F. Supp. at 559 ("sophisticated, knowledgeable purchasers wield[] great

economic power and hav[e] formidable bargaining strength’’)). Considering the volume of documents, testimony, and analysis produced in this matter, that is a slender reed.

In addition to a lopsided evidentiary showing, the Court has the benefit of a real-world event study to facilitate the evaluation of the parties’ competing arguments: the recent increase in the Black Lung Excise Tax (“BLET”). The BLET, which is imposed by Congress, increased at the beginning of 2020. PX6046 (Galli) 134:18-135:6. [REDACTED]

[REDACTED] See Tr. Vol. 3A (Smith) 16:16-17:11. [REDACTED]

[REDACTED] PPF ¶ 141—despite the supposed downward pressure exerted by low natural gas prices and the risk of coal plant retirements. See Section I.A.1.b.iii, *supra*. And the FTC presented testimony from five different customers that they did not reduce their coal burn or consider reducing the amount of coal they will buy in 2020 as a result of that increase. PPF ¶ 141. While the BLET increase was not quite as large as what economists use to represent a SSNIP (typically 5 percent), this recent, real-world example nonetheless provides corroborating evidence that some customers will indeed be unable to avoid a non-negligible price increase.

Counsel for Peabody suggested during closing arguments that, as a matter of contract, it has always been the case that the BLET, along with any other government surcharge, is passed through to the customer, and the parties do not know in advance when such a surcharge will be imposed, so it is not an apt comparison to other types of price increases. Closing Arguments (Hassi) at 94:12-96:9. Counsel further pointed out that Dr. Hill’s analysis was of contracts entered into in 2019, arguing that the FTC did not show whether the early 2020 increase has had an effect in the market because the market participants are now aware of the price increase. *Id.*

As a result, he described the BLET as a “red herring” with respect to determining customers’ ability to protect themselves from an SPRB price increase. *Id.*

Counsel’s arguments have merit. It is true that Dr. Hill did not perform a systematic analysis of the effect on coal purchaser behavior of the early 2020 BLET surcharge. But the case study is more than a red herring for two reasons. First, the Court heard testimonial evidence from five utilities that the BLET pass-through did not affect their SPRB coal procurement or burn behavior. While an economic analysis of the BLET’s effects would have been welcome, the testimonial evidence allows the Court to discern that at least some of Defendants’ customers must absorb price increases. Moreover, Defendants could have produced evidence to the contrary in the form of customer testimony or sales data, but they did not. Therefore, those customers’ testimony stands unrebutted.

Second, the fact that such pass-through language is a standard part of coal contracts does not lessen the BLET’s relevance. If the cost of SPRB coal went up 3% and customers did not change their coal burns or purchasing plans, that is relevant no matter the cause of the increase. If customers could readily switch to burning natural gas or use negotiating power to avoid a price increase, they would, whether the increase was caused by taxes or something else. SPRB coal customers’ responses (or lack thereof) to the BLET, together with the related testimony elicited by the FTC, suggest that they cannot.

D. Likelihood of price increases

Currently, Defendants are both pursuing business strategies that focus explicitly on reducing output from their SPRB mines. Peabody’s President and CEO stated in a Q4 2018 earnings call that its thermal operations, including in the SPRB, “continue to emphasize value over volume in the face of reduced coal demand” to generate higher margins for investors.

PX9104-007. At that time—less than a year before the JV was announced—he stated that Peabody intended to reduce production at NARM by 10 million tons because they “[were] not generating margins [they found] acceptable for [their] investors.” *Id.* The year before, Peabody’s CFO and Executive Vice President stated that “new Peabody isn’t about volumes but about margins and return.” PX9098-004. Meanwhile, Arch’s strategy is “to harvest the remaining cash flows [from its SPRB mines] and use the proceeds to invest in [non-SPRB] assets or return capital to shareholders.” PX2628-002.

Defendants argue that this Court cannot simply assume, based on the FTC’s showing of “increased concentration in a narrowly defined market” that the JV will have anticompetitive effects. DPFCL ¶ 223. Such effects are the result of “purposeful business choices made by the corporation’s management calculated, affirmatively or by effect, to achieve those ends.” *Deutsche Telekom*, 439 F. Supp. 3d at 245. According to Defendants, they have presented evidence showing that it would be self-defeating for the JV to raise prices, while the FTC has produced “no evidence that Defendants intend to raise prices” post-JV. DPFCL ¶¶ 223-24. In light of the above statements of corporate strategy, the argument that “coal producers have no incentive to raise prices and further erode future coal demand,” DPFCL ¶ 222, is not well-taken.

That finding is bolstered by Dr. Hill’s Cournot model, which economists use to predict the effect of changes in concentration in a market, especially in concentrated markets with a relatively homogenous product like SPRB coal. PX8001 (Hill Report) ¶ 180. In order to make the analysis more favorable to Defendants, Dr. Hill assumed that Defendants would achieve and pass through the 5.5 percent marginal cost efficiencies that they claim will result from the JV and that they would follow through on a pledge to implement a 15-cent discount on all contracted

tons between the date the JV closes and the end of 2022. *Id.* ¶ 179. He also included the price elasticity of demand, which captures competition with other fuels. Tr. Vol. 4A (Hill) 76:1-5.

Dr. Hill implemented two versions of the Cournot model. The first “baseline” model assumes that demand for SPRB coal remains constant over time. PX8001 (Hill Report) ¶ 191. That version predicts that the JV will lead to significantly higher prices for SPRB coal in every year from 2021 to 2030, causing total harm to consumers with a net present value of almost \$1.7 billion. *Id.* ¶¶ 195-96, Figs. 31-32. The second version of the Cournot model assumes an annual decline in demand for SPRB coal of [REDACTED] per year from 2021 to 2030, [REDACTED] [REDACTED] *Id.* ¶ 198; PX1621-034. This model still predicts significantly higher prices for SPRB coal over the next ten years, causing total harm with a net present value of over \$1 billion. PX8001 (Hill Report) Figs. 33-34. According to Dr. Hill, “[t]hese results show that neither the parties’ 15-cent discount nor their claimed marginal cost efficiencies will likely prevent the joint venture from substantially reducing competition, raising prices, and harming customers.” *Id.* ¶ 197.

Defendants object to Dr. Hill’s applications of the Cournot model on a number of grounds, most notably that they fail to incorporate dynamic risks such as coal plant closures, the growth of renewables, or the effect of SPRB coal prices on demand, and that his model’s predicted margins do not match observed margins. DPFFCL ¶¶ 227-28. Defendants argue that Dr. Hill’s hypothesized harm falls away when dynamic effects are incorporated

Dr. Hill’s analysis stands up to Defendants’ critiques. His margins are based on Defendants’ own accounting data. Tr. Vol. 9B (Hill) 52:12-53:2; PX8001 (Hill Report) ¶ 250 and Fig. 52 (citing PX2755 and PX1614). And he does not ignore dynamic competition, as Defendants argue. In his declining demand version of the Cournot model, he used Peabody’s

own projections of SPRB coal production volumes, which, according to Mr. Galli, take dynamic competition from other fuels into account. PX8001 (Hill Report) ¶ 198 (citing PX1621-031); Tr. Vol. 6B (Galli) 7:10-19 (Peabody considers natural gas prices to be the “biggest factor” affecting their SPRB coal forecasts). In his report, Dr. Hill also calculated the total harm to consumers using faster and slower decline rates of demand for SPRB coal, as well as a variable decline rate based on Peabody’s exact annual projections formulated earlier this year. *Id.* ¶ 256. No matter which figures Dr. Hill used, the Cournot model predicted substantial harm to consumers. *Id.* at Fig. 56.

Dr. Hill also explained the underlying logic for these results: The JV’s anticompetitive effect “is rooted in the fact that it combines the two SPRB coal suppliers that own the largest, most important mines in the SPRB. It puts in one set of hands assets that would otherwise compete vigorously with one another, even as demand fell and other mines ceased to produce.” *Id.* ¶ 202. According to [REDACTED] another SPRB coal producer, the JV will “have enough 8800 production capacity and market share to control the 8800 market pricing which will set the market for 8400” and will “have the production capacity to take over the entire PRB forecasted demand from 2021 on.” PX3021-001.

E. Conclusion: FTC has established a presumption of anticompetitive effects.

“Ultimately, this Court need not decisively sift through various models and theories.” *Tronox*, 332 F. Supp. 3d at 212; *see also Sysco*, 113 F. Supp. 3d at 36-37 (noting that the court “hesitates to rely on” an expert’s precise calculations where such calculations are subject to valid criticism, and concluding that “when evaluated against the record as a whole, [the expert’s] conclusions are more consistent with the business realities” of the relevant market). The Court’s task is to determine whether the FTC “has raised questions going to the merits so serious,

substantial, difficult and doubtful as to make them fair ground for thorough investigation, study, deliberation and determination by the FTC in the first instance and ultimately by the Court of Appeals.” *Heinz*, 246 F.3d at 714-15 (internal quotation omitted); *see also Tronox*, 332 F. Supp. 3d at 212. The FTC has cleared that bar.

The FTC’s HHI analysis created a “presumption . . . that [the JV] will substantially lessen competition” by “showing that the [JV] will result in a significant market share and an undue increase in concentration” in the SPRB coal market. *Swedish Match*, 131 F. Supp. 2d at 166. The FTC then reinforced that presumption with evidence that the JV would eliminate head-to-head competition between Defendants and increase Defendants’ already-existing incentives to engage in strategic output withholding, to the detriment of its customers. The FTC therefore has firmly established a presumption that the proposed JV will have anticompetitive effects in violation of the Clayton Act.

III. Defendants’ Case Against Likelihood of Anticompetitive Effects

The presumption that the JV will substantially lessen competition is rebuttable. Defendants can either “discredit[] the data underlying the initial presumption in the government’s favor,” or “affirmatively show[] why [the JV] is unlikely to substantially lessen competition.” *Baker Hughes*, 908 F.2d at 991. “The more compelling the [FTC’s] prima facie case, the more evidence [Defendants] must present to rebut it successfully,” though, and here the FTC’s case is quite compelling. *Id.*

The proposed JV involves the two biggest producers of the relevant product in an already concentrated market, and it would create a single entity with 68% market share. That share far exceeds what the Supreme Court has held to be a concerning level of concentration. *See Phila. Nat’l Bank*, 374 U.S. at 364–65 (a merger resulting in a single firm controlling at least 30% of

the relevant market was sufficient to “raise an inference that the effect of the contemplated merger . . . may be substantially to lessen competition”); *Continental Can*, 378 U.S. at 461 (a merger resulting in a company with 25% market share “falls squarely within the principle that where there has been a history of tendency toward concentration in the industry[,] tendencies toward further concentration are to be curbed in their incipency.”).

Some courts have found market share to be too crude and have preferred a focus on HHI. *F.T.C. v. PPG Indus., Inc.*, 798 F.2d at 1503 (“The FTC and the Department of Justice, as well as most economists, consider [HHI] superior to such cruder measures as the four- or eight-firm concentration ratios which merely sum up the market shares of the largest four or eight firms.”). The result in this case is the same. An increase of over 2,000 in the HHI index is more than ten times the threshold for a presumption of enhanced market power. Guidelines § 5.3; *Heinz*, 246 F.3d at 716. And the FTC has produced substantial evidence that the JV would eliminate head-to-head competition; that SPRB coal customers would have trouble resisting a price increase; and that such an increase is likely. Thus, Defendants have an uphill climb to rebut the resulting presumption that the JV will harm competition.

To that end, Defendants argue that customers have multiple strategies available for resisting a potential price increase. They contend that customers will continue to substitute other fuels for coal because of changes in relative prices, thereby constraining the JV in both the short term—by reducing coal burn, deferring deliveries and purchasing less coal— and in the long term—by retiring their coal EGUs. DPFCL ¶ 234. Defendants also argue that the JV will face competitive constraints from other SPRB coal producers, including through possible expansion by other SPRB coal producers at their mines. *Id.* ¶ 235.

None of Defendants' arguments can defeat the presumption of anticompetitive effects created by the FTC's showing.

A. Competition from other fuels and other SPRB coal suppliers

Defendants argue that, "[e]ven if other fuels are not a substantial enough constraint to be included in the relevant product market, customers will continue to substitute (through generation or purchasing) other fuels for coal due to relative changes in price and thereby constrain the Joint Venture in both the short term, by reducing coal burn, deferring deliveries and purchasing less coal, and the longer term, by retiring their coal EGUs." DPFFCL ¶ 234. Additionally, they argue that the JV "will also continue to face critical competitive constraints from other coal producers." *Id.* ¶ 235.

As discussed in Section I.A.1.a, above, Dr. Hill's actual elasticity of demand calculation incorporates competition from other fuels. Tr. Vol. 4A (Hill) 47:21-49:14. There is no dispute that natural gas and renewables impose some amount of competitive pressure on SPRB coal producers; the key question is whether such competition is likely to constrain the JV from harming competition, and Dr. Hill's HMT analysis strongly suggests that it is not.

In addition, multiple SPRB coal customers testified about the challenges of switching from SPRB coal to another fuel source. Renewables are not dispatchable baseload units; they are intermittent fuel sources that are difficult to store. Customers cannot replace baseload units with non-dispatchable, intermittent resources. PPFF ¶ 144 (collecting witness testimony). Natural gas prices are projected to rise relative to SPRB coal prices in coming years, making them a less effective constraint moving forward. *Id.* ¶ 145. And even at current low prices, natural gas generation is still more expensive than SPRB coal for many customers. *Id.* ¶¶ 146-47 (collecting witness testimony).

Professor Julie Carey, Managing Director at National Economic Research Associates, Inc., argued that Defendants would not want to raise SPRB coal prices if it meant that coal units would dispatch less power because their bids would exceed the market-clearing price. She determined that a 5 percent SPRB coal price increase translated to a \$0.28/MwH increase in the cost of generating power for an average SPRB coal plant. Tr. Vol. 6A (Carey) 85:18-24. She then applied the price increase to several dispatch stacks, comparing the generating costs of SPRB coal units supplied by Defendants to the costs of the next units in the dispatch stacks that are not also supplied by Defendants, *id.* at 91:8-23, finding that even small cost differences affect the likelihood of an EGU bidding below the market-clearing price and being dispatched. *Id.* at 51:3-53:9

Surely it is true that the lower the price of coal, the lower a unit costs to operate, the lower the utility can bid into the ISO, making that unit marginally more likely to dispatch. And so, all other things being equal, a modest increase in the cost of coal, translated directly into an increase in a utility's bid for its coal EGU, could move the unit up the dispatch stack, reducing its odds of dispatching. But all other things are not equal. Tr. Vol. 6A (Carey) 73:25-74:5 (“In the real world, the sale of electricity and the competition that exists is highly complicated.”) Professor Carey's analysis tells us nothing about *how much* any particular unit's odds of dispatching would be impacted by the hypothesized price increase, which would depend on not just the commodity cost of coal but also many other factors, starting with where the unit's original bid was situated relative to the market-clearing price. If it started out well below the market-clearing price, a modest increase in its bid would be unlikely to affect whether it dispatches.¹² Also relevant would be all of the other factors that go into the utility's *bid* for that

¹² One utility representative testified that its coal units are so far “in the money” that an increase of 50% in the cost of coal would not cause them not to run: “[T]he units still run, it's just that that margin that

unit, as ISOs make dispatch decisions based on utilities' bids, rather than their costs. PX6029 (Kimm) 30:18-25 (units dispatch "based on their offer ... not necessarily their cost"). Witnesses testified that the factors affecting bids are manifold. Tr. Vol. 1B (Meyer) 42:11-43:2 (bids into MISO account for a "whole host of other parameters" beyond cost to operate EGUs); Tr. Vol. 6A (Carey) 79:6-25 (EGUs in ISOs employ multiple bidding strategies). Plus there are various considerations that might cause a unit to be dispatched out of order or self-committed.¹³ See, e.g., Tr. Vol. 1B (Meyer) 40:11-42:2 (coal units may self-commit because the RTO day-ahead market does not capture the costs associated with starting and stopping a coal-fired generating unit); [REDACTED] (ISOs may pick a higher cost generating unit over a lower cost generating unit if the higher cost unit provides another benefit such as reliability or alleviation of transmission constraints); [REDACTED] (same).

In sum, the dispatch of generation units in wholesale electricity markets is complex and involves many interrelated factors. PPFF ¶¶ 155-165. It seems unlikely that an increase in the mine-mouth price of coal would translate neatly into a single effect over all units bid in by all utilities into all ISOs. But even if it did, it would be impossible to know how much of a deterrent it might be to increasing coal prices without knowing how such an increase would affect the ability of coal EGUs to *dispatch*. Tr. Vol. 6A (Carey) 74:19-75:24 (an EGU's variable cost is not the sole determinant of whether that unit generates electricity).

they were making shrinks and shrinks and shrinks as the coal gets more expensive, and all that means is that my customer rates ultimately are higher and higher and higher." [REDACTED]

¹³ Self-commitment is an exception to the "least-cost dispatch" rule: when certain EGUs are bid into ISOs as "self-committed" or "must run," the utility is directing the ISO to operate the unit regardless of its variable costs. Tr. Vol. 6A (Carey) 80:1-5; [REDACTED] In most circumstances, self-committed units dispatch economically, PX9191-001; Tr. Vol. 6A (Carey) 81:17-82:1, and uneconomic self-commits are highly discouraged by ISOs and regulatory authorities, as they are inconsistent with least-cost dispatch. Tr. Vol. 6A (Carey) 33:9-33:14.

The FTC also points out that ISOs already operate today, so SPRB coal buyers are presumably already exercising any leverage they may have in their negotiations with SPRB coal suppliers based on the fact of inter-fuel competition in the ISO market. PPFF ¶¶ 153-54.

Moreover, as discussed in Section II.C, above, the BLET pass-through illustrates that a price increase of a similar magnitude to that which was considered by Professor Carey is unlikely to have a meaningful effect on coal purchases, suggesting that it is unlikely to meaningfully affect coal dispatch. Professor Carey's analysis does not suggest anything to the contrary.

And as will be described at greater length in Section III.C, below, it is unlikely that the other SPRB coal producers, which collectively control about 32% of SPRB coal production, will be able to expand output sufficiently to impose a meaningful competitive constraint on the JV.

A representative from NTEC, the third-largest SPRB coal producer and the owner of the Antelope mine, [REDACTED]

[REDACTED] PX6009 (Tipton) 166:12-167:3. Kiewit, another SPRB coal producer, believes that the JV will [REDACTED]

[REDACTED]
[REDACTED] PX3021-001.

B. Arch's diminished competitiveness in the but-for world

The Eighth Circuit has instructed that “when examining a merger, a court must necessarily compare what may happen if the merger occurs with what may happen if the merger does not occur.” *Nat'l Tea Co.*, 603 F.2d at 700. And Defendants argue that Arch, in particular, will struggle if the JV is enjoined. *See also Arch Coal*, 329 F. Supp. 2d at 153 (“A weak financial condition, or limited reserves, may mean that a company will be a far less significant competitor than current market share, or production statistics, appear to indicate.”).

Arch argues that it will become a far less important SPRB coal supplier and [REDACTED]

[REDACTED] DPFCL ¶

232. Arch recently has operated at a loss in the SPRB, with losses in the second quarter of 2020 of [REDACTED] cents per ton. Tr. Vol. 5A (Lang) 82:4-13. The company claims that, absent the JV, it will

[REDACTED] which would allow Arch to focus on its most profitable operations in the hopes of earning positive margins and [REDACTED]

[REDACTED] *Id.* at 100:8-25.

First, the Court notes that Arch’s underlying logic— [REDACTED] —supports the Court’s finding that the parties have the incentive and intention to maximize profits by cutting output.

Second, Defendants explicitly disclaim any reliance on the “failing firm” defense; rather, they draw the Court’s attention to “the industry’s struggles and the impact they have on Defendants’ employees and local economies and communities when assessing the balance of equities.” DPFCL ¶ 256. The Court certainly does take note of all of those circumstances. But no matter the outcome of this proceeding, Arch “[has] made [its] decision” to “pivot[] away” from SPRB coal production. Tr. Vol. 5A (Lang) 102:8-15. In other words, while Arch and the State of Wyoming believe that the JV may help avoid unplanned job losses, Arch ultimately intends to [REDACTED] with or without the JV. [REDACTED]

[REDACTED] *Id.* at 100:8-25. To the extent that these realities affect the balance of equities, the Court will consider those arguments at the proper time. They do not alter the Court’s analysis of the JV’s likely competitive effects.

C. Expansion by other SPRB coal producers

Lastly, Defendants argue that other SPRB coal producers will expand to offset any decrease in production caused by the JV.

As an initial matter, Peabody and Arch agree that greenfield entry into the SPRB coal market is “unlikely.” PPFF ¶ 181. The financial and regulatory barriers to entering the SPRB or obtaining licenses to expand into new areas within the SPRB are immense, and Dr. Hill testified, without rebuttal from Defendants, that it would take “a very long time” for a competitor to enter the market or expand existing mines. *Id.* ¶¶ 182-184. In light of this uncontroverted testimony, together with the facts that coal plants are retiring and no new coal plants are being built, the Court finds that it is unlikely that any new coal mines will open in the SPRB or existing mines will obtain regulatory approval for an expansion into new areas within the SPRB.

Undeterred, Defendants argue that the JV will face competition from other coal producers who can expand output at their existing mines without need for regulatory approval or substantial up-front expense. DPFFCL ¶¶ 235-38. Dr. Bailey estimated that SPRB coal producers other than Peabody and Arch had at least 70.5 million tons of excess capacity in 2019, which roughly equals Black Thunder’s annual output. DX4001 (Bailey Report) ¶ 91. Defendants contend that this excess capacity will only grow as demand continues to decline due to additional coal EGU retirements and shifts towards natural gas and renewables. DPFFCL ¶ 236. They point to Kiewit and NTEC in particular, [REDACTED] [REDACTED]. ¶ 238. They also note that other SPRB coal suppliers “compete and frequently win business in RFPs against Defendants today, and there is no reason to believe they would not continue doing so.” *Id.* ¶ 237.

Citing testimony from industry participants, the FTC counters that “existing firms are unlikely to invest capital in increasing output in hopes of capturing share from a massive JV with a dominant position.” PPFF ¶ 185. NTEC’s Antelope mine, the closest rival to Black Thunder and NARM, is [REDACTED]

[REDACTED] *Id.* ¶ 186. [REDACTED]

[REDACTED] Tr. Vol. 2B (Romer) 101:17-102:17. That testimony aligns with the deposition testimony of Mr. Harry Tipton, NTEC’s Chief Marketing and Operating Officer, who stated that [REDACTED] [REDACTED] PX6009 (Tipton) 127:15-128:6.

FM Coal’s mines are smaller and produce lower-heat and higher-sulfur coal that is a poor substitute for coal from NARM or Black Thunder. PPFF ¶ 135. Kiewit plans to [REDACTED] [REDACTED] [REDACTED] PX3022-009. No one contends that Blacks Hills or WFA, which both own much smaller mines that produce lower-heat and higher-sulfur coal, could replace any meaningful portion of the coal currently supplied by NARM and Black Thunder. PPFF ¶ 189.¹⁴ Additionally, some customers do not even solicit bids from suppliers other than Defendants because of the design of their EGUs. *Id.* ¶ 191.

Dr. Bailey’s argument about possible expansion by Defendants’ competitors rests on an assumption that every one of them could expand their annual production to their maximum annual delivered tons from 2010 through 2019. DX4001 (Bailey Report) Fig. 60. While that

¹⁴ Dr. Bailey argues that these mines are competitively meaningful because any coal purchased from these two mines would free up coal at rival mines. DX4001 (Bailey Report) ¶ 90. However, she discusses magnitudes of several hundred thousand tons per year, *id.*, which is around one percent of the annual production of Black Thunder alone.

measure may describe what is geologically *possible* (although her methodology is debatable), it is not the relevant measure for antitrust analysis. *F.T.C. v. ProMedica Health Sys., Inc.*, No. 3:11 CV 47, 2011 WL 1219281, at *57 (N.D. Ohio Mar. 29, 2011) (“Defendants must show both that entry is *likely*—meaning both technically possible [] and economically feasible—and that it will *replace* the competition that existed prior to the merger.”) (citing *Cardinal Health*, 12 F. Supp. 2d at 56) (emphasis in original). Dr. Bailey has not provided the Court with what is economically and geologically *feasible* in the next several years. On the other hand, the FTC has presented ordinary course business documents and statements from decision-makers at rival SPRB coal producers that clearly indicate that no other producer has the desire or wherewithal to expand production to an extent that would meaningfully reduce the likely anticompetitive effects of the JV.

Lastly, the Court notes that Defendants’ argument that SPRB coal suppliers would provide meaningful competition with the JV through the RFP process is in tension with their broader argument that the RFP process plays a comparatively insignificant role in constraining the cost of SPRB coal. Moreover, as noted above, Defendants’ ordinary course documents show that the individual Defendants are more likely to lose bids to one another, as opposed to other SPRB coal producers.

Accordingly, the Court concludes that expansion of rival SPRB coal producers is unlikely to offset the likely anticompetitive effects of the proposed JV.

D. Conclusion: Defendants fail to rebut evidence of likely anticompetitive effects.

Based on all of the evidence presented, the Court finds that, “because the proposed [JV] would eliminate head-to-head competition between the number one and number two competitors in the market for [SPRB coal],” the JV is likely to lead to anticompetitive effects in that market.

Sysco, 113 F. Supp. 3d at 65. Evidence of probable unilateral effects strengthens the FTC’s prima facie case that the merger will lessen competition in the national customer market. *See Heinz*, 246 F.3d at 717 (footnote omitted) (finding that “the FTC’s market concentration statistics are bolstered by the indisputable fact that the merger will eliminate competition between the two merging parties”); *Whole Foods*, 548 F.3d at 1043 (Tatel, J., concurring) (citation omitted) (internal quotation marks omitted) (“[T]here can be little doubt that the acquisition of the second largest firm in the market by the largest firm in the market will tend to harm competition in that market.”). This finding is bolstered by both Defendants’ stated goal to restrain production in order to increase margins.

Defendants present several rebuttal arguments, but they are unavailing. While there is evidence that SPRB suppliers compete with each other and with other non-coal fuel sources, many customers testified that they cannot resist a price increase or substitute to other fuels in response to one, and their experience with the BLET validates those claims. Arch is evidently [REDACTED] whether or not this Court enjoins the proposed JV, and any other discussion of Arch’s competitive position in the but-for world is more appropriate for the balancing of the equities. There is no prospect for new SPRB coal mines to open, and existing SPRB coal suppliers are unlikely to expand their mines to make up for any reduction in SPRB coal supply by the JV. Thus, Defendants have failed to rebut FTC’s showing that the proposed JV is likely to have anticompetitive effects in the SPRB coal industry.

IV. Defendants’ Claimed Efficiencies

Defendants’ other response to the FTC’s prima facie case is that the JV will achieve significant efficiencies that are likely to enhance competition, rather than hinder it.

The Supreme Court has not sanctioned an “efficiencies” defense in a case brought under Section 7 of the Clayton Act. *See F.T.C. v. Procter & Gamble Co.*, 386 U.S. 568, 580 (1967) (“Possible economies cannot be used as a defense to illegality. Congress was aware that some mergers which lessen competition may also result in economies but it struck the balance in favor of protecting competition.”). However, appellate courts and the Horizontal Merger Guidelines recognize that, in some instances, efficiencies resulting from the merger may be considered in rebutting the government’s prima facie case. *Heinz*, 246 F.3d at 720 (citations omitted). Where, as in this case, a court finds high market concentration levels, defendants must present “proof of extraordinary efficiencies” to rebut the government’s prima facie case. *Id.* (citations omitted) (requiring “extraordinary” efficiencies to rebut an increase in HHI of 510 points); *see also Sysco*, 113 F. Supp. 3d at 81-82.

The Court is not aware of any case, and Defendants have cited none, where the merging parties have successfully rebutted the government’s prima facie case on the strength of the efficiencies. *See CCC Holdings*, 605 F. Supp. 2d at 72 (stating that “courts have rarely, if ever, denied a preliminary injunction solely based on the likely efficiencies”). Yet even if evidence of efficiencies alone is insufficient to rebut the government’s prima facie case, such evidence may nevertheless be “relevant to the competitive effects analysis of the market required to determine whether the proposed transaction will substantially lessen competition.” *Arch Coal*, 329 F. Supp. 2d at 151 (citations omitted).

The Court must “undertake a rigorous analysis of the kinds of efficiencies being urged by the parties in order to ensure that those ‘efficiencies’ represent more than mere speculation and promises about post-merger behavior.” *Heinz*, 246 F.3d at 721. Specifically, the Court must determine whether the efficiencies are “merger-specific”—meaning they represent “a type of

cost saving that could not be achieved without the merger”—and “verifiable”—meaning “the estimate of the predicted saving must be reasonably verifiable by an independent party.” *H&R Block*, 833 F. Supp. 2d at 89 (internal quotation marks omitted) (citing Guidelines § 10); *Cardinal Health*, 12 F. Supp. 2d at 62 (“In light of the anti-competitive concerns that mergers raise, efficiencies, no matter how great, should not be considered if they could also be accomplished without a merger.”).

Defendants bear the burden of demonstrating that their claimed efficiencies are merger-specific, *H&R Block*, 833 F. Supp. 2d at 90, which requires demonstrating that the efficiencies “cannot be achieved by either company alone because, if they can, the merger’s asserted benefits can be achieved without the concomitant loss of a competitor.” *Heinz*, 246 F.3d at 722.

Defendants must also demonstrate that their claimed efficiencies would benefit customers. *CCC Holdings*, 605 F. Supp. 2d at 74; *see also* Guidelines § 10 (“Cognizable efficiencies have the potential to reverse competitive harm only if they are likely to be “passed through to customers.”); *id.* (“It “is incumbent upon the merging firms to substantiate efficiency claims.”).

Defendants claim that the JV will generate significant efficiencies by optimizing production across mines that are currently operated separately, thereby reducing the cost of operations and increasing the output of coal. DPFFCL ¶ 240. Dr. Israel estimated that the JV will achieve \$337.4 to \$495.1 million in variable cost savings through the end of the mines’ lives and \$164.4 to \$277.8 million in variable cost savings in its first five years. *Id.* Defendants argue that these “[s]ignificant variable cost reductions are most likely to encourage further coal production, reduce coal prices, and to be pro-competitive.” *Id.* ¶ 241. As a result, the JV “will result in lower prices than would prevail in the but-for world, and will thereby enhance competition and benefit customers.” *Id.* ¶ 242. Further, the JV will better position Defendants to

compete in today's energy marketplace, ensuring that their mines will continue to operate and providing customers "access to a stable and reliable supply of SPRB coal in the future." *Id.*

¶ 243.

A. Verifiability

Defendants argue that their claimed efficiencies are verifiable because the "bulk" of them "result from joining Arch and Peabody's contiguous SPRB mines and reducing incremental production costs." *Id.* ¶ 245. Mr. Brock Haas, Peabody's Vice President of Mine Finance, testified about the "Clean Team" process used by Defendants, which involved professionals from both companies with experience in mining and incorporating contiguous mine operations in developing a joint mine plan, comparing that joint mine plan to Defendants' stand-alone plans, and estimating the JV's efficiencies. Tr. Vol. 8B (Haas) 30:2-39:16. Mr. Haas described the projected efficiencies that would result from combining formerly separate production operations to reduce incremental production costs by using more efficient mining methods, better utilizing mining equipment, reducing mine reclamation costs, and reducing purchasing costs. *Id.* at 40:3-46:24. Mr. Lang also testified about these efficiencies, describing how the combination of adjoining mines would enable more efficient mining. Tr. Vol. 6B (Lang) 8:25-14:15.

Defendants argue that their projected efficiency figures are credible because they have achieved—in fact, exceeded—similar efficiencies in similar transactions in which they integrated contiguous mines into Black Thunder. DPFFCL ¶ 246. In 2004, Arch acquired the North Rochelle mine from Triton, dissolving more than five miles of common boundary, and in 2009, Arch acquired the Jacobs Ranch mine from Rio Tinto and dissolved a six-mile boundary. *Id.* ¶ 59. In both acquisitions, Arch projected significant cost-saving efficiencies due to removing the common boundaries and integrating the stand-alone mines. *Id.* ¶ 60. Mr. Lang, who was

integrally involved in both of those previous transactions, testified that Arch exceeded the projected efficiencies in both transactions. *Id.* ¶ 61; Tr. Vol. 5A (Lang) 114:9-118:25; DX8845-0019. For instance, at closing of the Jacobs Ranch transaction in 2009, Arch projected roughly [REDACTED] million in lifetime cost savings; in 2014, after achieving substantial returns in the first few years after the transaction, Arch projected total savings at roughly [REDACTED] million. DPFFCL ¶ 61; DX6029.¹⁵

The FTC argues that Defendants' efficiencies are not verifiable because the mine plans that form the basis of the efficiencies calculations are long-term forecasts based on assumptions that change over time, and they are a "closed box". PPFF ¶¶ 197-99. In particular, the JV mine plan is not an ordinary course document, and Defendants did not disclose the assumptions and factual foundations that would allow the individual claimed efficiencies to be verified. *Id.* ¶ 200. Dr. Israel accepted these assumptions and used them in his calculations, *id.* ¶ 204, but Dr. Mark Zmijewski, the FTC's efficiencies expert, found that many of the numbers in the spreadsheets underlying Dr. Israel's calculations were hard-coded, meaning that the cells contained digits with no references to other figures or calculations, rendering them impossible to verify without more explanation. *Id.* ¶ 202.

The FTC provided several examples of the problems that result from Defendants' reliance on such assumptions. For instance, the JV mine plan includes hard-coded numbers

¹⁵ Defendants argue that Arch's customers benefited from both prior transactions because North Rochelle and Jacobs Ranch were both struggling as stand-alone assets, and the combination allowed Arch to increase production and lower costs relative to the prior owners' stand-alone plans. DPFFCL ¶ 63; PX9065-002. While the FTC argues that these transactions did not benefit customers because SPRB coal prices increased following these acquisitions, PPFF ¶ 216, the record does not support the FTC's claim. There is a critical distinction between lower prices in absolute terms and lower prices relative to those that would have prevailed absent the acquisition, and the FTC has not shown that Arch's prices were higher post-merger than they would have been absent the merger.

related to equipment productivity, which measures the amount of dirt a machine can move in a given pit. Productivity estimates are based on the judgment and expertise of one of Peabody's engineers. PX6031 (Gurgenli) 165:14-173:17. Dr. Zmijewski complains that he cannot verify such as assumption without the historical data used to determine equipment productivity or an explanation why the equipment productivity would change by the specified amount if the JV were consummated. Tr. Vol. 9B (Zmijewski) 140:23-141:3.

The FTC also criticizes the “unfounded assumptions” in Defendants’ calculations. PPFF ¶ 204. As an example, the FTC points to Defendants’ assumption that, [REDACTED]
[REDACTED]
[REDACTED] PX1048-004. [REDACTED]
[REDACTED]
[REDACTED] PX7013 ¶ 6.

Also problematic, according to the FTC, is Defendants’ assumption that increasing volume in purchasing will lead to an additional [REDACTED] discount across suppliers. PPFF ¶ 205. Defendants base the [REDACTED] figure on the responses they received from a subset of suppliers who provided nonbinding responses to Defendants’ inquiries; they have not verified that the informal predictions of suppliers would materialize if the JV were consummated. Tr. Vol. 9B (Zmijewski) 153:5-155:19.

Additionally, the FTC argues that Dr. Israel did not verify the efficiencies because he failed to independently identify the assumptions, factual foundations, and calculations underpinning the JV mine plan, and his reliance on the parties’ business judgment and private conversations renders his analysis unverifiable. PPFF ¶ 206. Also, Dr. Israel claimed to test the

efficiencies with a “sensitivities” analysis, but his analysis was less rigorous than Peabody’s ordinary course standards. *Id.* ¶ 208.

Finally, the FTC rejects the notion that evidence from Arch’s past transactions substantiates their claimed efficiencies, because verification of current claimed efficiencies with past-achieved efficiencies requires a mapping of the individual claims. *Id.* ¶¶ 213-14. As an example of efficiencies from the Triton transaction that do not map onto the efficiency claims in this case, the FTC points to the fuel efficiency in the Triton transaction, which concerned more efficient routes that consumed less fuel, while the [REDACTED] efficiency in this transaction is based on [REDACTED]. *Id.* ¶ 214.

Defendants respond that the JV mine plan is, by definition, outside the current ordinary course of Defendants’ business. DPFCL ¶ 247. They point out, however, that they used the same ordinary course methodologies and processes that they use in their stand-alone mine planning. Tr. Vol. 8B (Haas) 35:9-36:3.

The bulk of the JV’s efficiencies derive from the physical reality that the seven-mile boundary separating Black Thunder from NARM is geologically arbitrary and the operational reality that operating as one mine instead of two will make for a more efficient operation. A customer witness suggested that the possible efficiencies were apparent to anyone who had visited the mines and seen the manner in which they are separated. [REDACTED]

[REDACTED] Based on testimony from Defendants’ employees and several customers, as well as the results of previous analogous mergers undertaken by Arch, it seems clear that the projected efficiencies are more than a mirage. While Dr. Zmijewski’s testimony identified several flaws with Defendants’ process, and the Court commends his rigor, the Court also has no doubt that there is truth to Defendants’ claim that the JV is likely to achieve significant efficiencies.

The Court is, of course, concerned about the fundamental unverifiability of efficiencies that are grounded in the business judgments of Defendants' employees. Also, as the FTC's examples make clear, some portion of Defendants' projected efficiencies are unrealistic or oversimplified. But Defendants have shown that they used a process substantially similar to that used in the ordinary course of business to determine the anticipated efficiencies arising from this transaction, and they have supported their claims with evidence from past transactions. Thus, the issues identified by the FTC do not render Defendants' efficiencies wholly unverifiable.

B. Specificity

In addition to being verifiable, claimed efficiencies must also be specific to the JV. Efficiencies are merger-specific if they "cannot be achieved by either company alone." *F.T.C. v. H.J. Heinz Co.*, 246 F.3d 708, 722 (D.C. Cir. 2001); *see also* Guidelines § 10 (agencies "credit only those efficiencies likely to be accomplished with the proposed merger and unlikely to be accomplished in [its] absence").

Most of Defendants' projected efficiencies result from combining Defendants' contiguous NARM and Black Thunder mines and optimizing them under a joint mine plan. DPFCL ¶ 251. Mr. Haas testified that neither Peabody nor Arch alone could achieve the synergies offered by the JV because it "would just be impractical By getting rid of the border, it allows you to unlock all these synergies." Tr. Vol. 8B (Haas) 38:19-39:16. Defendants also point to their bankruptcy filings within the last five years as evidence that they have done everything they can to make their separate operations as efficient as possible. DPFCL ¶ 250. They claim to have very limited scope to continue cutting costs as separate entities. *Id.*

The FTC counters that it is incorrect to assume that any differences between the stand-alone and JV mine plans are attainable only through the JV. One significant component of the claimed efficiencies is [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] and Arch has bought and sold used draglines, at least one of which is involved in the projected efficiencies in this case. Tr. Vol. 5B (Lang) 19:5-22.

While the parties may prefer not to [REDACTED]

[REDACTED] Defendants have not shown that such a sale could not be accomplished in the absence of the JV. Similarly, the FTC points out that [REDACTED] is not merger-specific because Arch could learn Peabody's best practices through means other than the JV. PPFF ¶ 220; PX8002 (Zmijewski Report) ¶¶ 160-62.

The FTC also argues that Defendants incorrectly assume that any current differences between Arch and Peabody's pricing today derives from differences in purchasing volumes, which is belied by evidence showing that certain pricing differences reflect different preferences and tradeoffs during negotiations. PPFF ¶¶ 221-23. Per the FTC, "Arch and Peabody do not need the JV to make different contracting choices." *Id.* ¶ 222 (citing PX8002 (Zmijewski Report) ¶¶ 133-41).

The Court agrees with the FTC that some portion of Defendants' claimed efficiencies are probably achievable without the JV. *See generally* PX8002 (Zmijewski Expert Report) ¶¶ 131-72. Still, the underlying logic of the JV is undeniable. While some of the anticipated

efficiencies may not be merger-specific, operating the mines jointly will clearly make possible substantial efficiencies.

C. Other considerations

The FTC raises several other objections to Defendants' efficiencies calculations. The first, and most compelling, objection is that Defendants' forecasts use, on average a 20-year horizon. Tr. Vol. 9B (Zmijewski) 125:5-19. All forecasts, including financial forecasts, become less accurate as the time horizon lengthens. *Id.* For that reason, the Merger Guidelines are skeptical of claimed efficiencies in the distant future, Guidelines § 10 n.15, and parties presenting efficiencies claims commonly limit the claims to five years or less, Tr. Vol. 9B (Zmijewski) 125:20-127:13, as Arch did in the Triton merger. PX2760; PPFF ¶ 211. It is therefore noteworthy that Defendants present their claimed efficiencies here over the life of the mine, rather than over a five-year time horizon. This longer time horizon increases the net present value of the variable cost savings from [REDACTED] (over five years) to [REDACTED] (over the life of the mine). DX4003 (Israel Report) ¶ 138.¹⁶

The FTC also argues that the JV has not demonstrated that it will share efficiencies with customers because the price forecast included in Defendants' claimed efficiency analysis shows [REDACTED] PPFF ¶ 224. It points to Defendants' own price forecast, as well as statements from customers who reported that Defendants told them frankly that they did not expect the price of SPRB coal fall as a result of the JV. *Id.* at ¶¶ 224-25.

That argument is intuitive but unavailing. The Court's objective is to determine the JV's likely effect on competition compared to the but-for world in which the JV is not allowed. *Nat'l*

¹⁶ The very fact that Dr. Israel calculated and included a five-year efficiencies calculation suggests that he was aware of the difficulty of projecting savings over the life of the mine.

Tea Co., 603 F.2d at 700 (“[W]hen examining a merger, a court must necessarily compare what may happen if the merger occurs with what may happen if the merger does not occur.”). The fact that the world with the JV does not have lower prices than the present is not, in itself, dispositive. Defendants told at least one customer that the JV will forestall price increases. [REDACTED]

[REDACTED] In other words, Defendants stated that prices would rise faster in the but-for world without the JV. If true, then the JV’s forestalling of price increases is a cognizable benefit to Defendants’ customers.

D. Conclusion: Even with efficiencies, Defendants do not rebut presumption of likely anticompetitive effects.

“Even if the savings are neither as great as defendants have claimed nor capable of precise quantification based on the evidence presented by defendants,” the Court is convinced that combining the adjacent Black Thunder and North Antelope Rochelle mines “will inevitably allow [the JV] to achieve some measure of lower costs and higher productivity.” *Arch Coal*, 329 F. Supp. 2d at 153. These efficiencies, therefore, are “relevant to an assessment” of the likely state of competition in the post-JV SPRB coal market and provide “some limited additional evidence to rebut the claim of post-merger anticompetitive effects.” *Id.*

That said, even granting Defendants every dollar of their claimed efficiencies (which, based on the foregoing, is not wholly justified) and making the implausible assumption that they would pass every penny of those efficiencies on to their customers, Defendants’ claimed efficiencies still would not offset the likely competitive harm to those same customers predicted by the more conservative version of Dr. Hill’s Cournot model. *See* Section II.D, *supra*. Therefore, the Defendants’ claimed efficiencies add little to the Defendants’ effort to rebut the FTC’s case that the proposed JV would likely have anticompetitive effects in the SPRB coal market.

Even giving Defendants the full benefit of the doubt as to efficiencies, then, they still have failed to “produce evidence showing that the FTC’s *prima facie* case ‘inaccurately predicts the relevant transaction’s probable effect on future competition.’” *Sanford Health*, 926 F.3d at 962-63 (quoting *Baker Hughes*, 908 F.2d at 991). The FTC has succeeded in showing that JV is likely to lead to anticompetitive effects in the SPRB coal market and is thus likely to succeed on the merits of its challenge under Section 7 of the Clayton Act. 15 U.S.C. §§ 18, 53(b).

V. The Equities

The Court’s finding that the FTC has established a likelihood of success on the merits creates a presumption in favor of a preliminary injunction. *Swedish Match*, 131 F. Supp. 2d at 172. Despite this presumption, “Section 13(b)’s ‘public interest’ standard still requires the court to weigh the public and private equities of enjoining the [JV].” *Sysco*, 113 F. Supp. 3d at 86 (citing *Heinz*, 246 F.3d at 726). In conducting that analysis, the Court is mindful that “no court has denied a Section 13(b) motion for a preliminary injunction based on weight of the equities” where the FTC has demonstrated a likelihood of success on the merits. *Sanford*, 2017 WL 10810016, at *31.

The principal equitable consideration weighing in favor of a preliminary injunction is the “strong public interest in effective enforcement of the antitrust laws and in the FTC having the ability to order effective relief if it succeeds in an administrative proceeding.” *Id.* “[C]ompetition is our fundamental national economic policy, offering as it does the only alternative to the cartelization or governmental regimentation of large portions of the economy.” *Phila. Nat’l Bank*, 374 U.S. at 372. The purpose of the preliminary injunction is to preserve the FTC’s ability to obtain effective relief if the JV is ultimately found to violate Section 7 of the Clayton Act. Allowing the transaction to proceed and then later “‘unscrambling’ the eggs” upon

a finding of illegality by the FTC is a “daunting and potentially impossible task,” *Sysco*, 113 F. Supp. 3d at 87, which supports the issuance of an injunction.

On the other side of the ledger, the Court is convinced that the JV will generate substantial efficiencies, and blocking the transaction will prevent those synergies from being realized before the completion of the FTC’s administrative proceeding.¹⁷ Also, according to the State of Wyoming in its amicus brief, unforeseen abrupt mine closures and bankruptcies could result in immediate layoffs affecting the entire state of Wyoming. Doc. [273-1] at 14. The way the State sees it, the Court’s choice is between a haphazard consolidation via bankruptcies and “[t]he thoughtful planned consolidation of coal mines in Wyoming” *Id.* Similarly, although Defendants do not make a “failing firm” defense, DPFCL ¶ 256, they did present evidence that Arch faces an uncertain future in the SPRB if the JV is enjoined. Tr. Vol. 5A (Lang) 101:1-4 (stating “full energy . . . has been on this JV” and that “it is best not only for our customers but especially for our employees”); Tr. Vol. 3A (Smith) 65:20-22 [REDACTED]

The Eighth Circuit has instructed that a court “ought to exercise extreme caution” when considering a request for a preliminary injunction, especially “in an industry . . . experiencing significant and profound changes.” *Tenet Health*, 186 F.3d at 1055. SPRB coal, as well as the energy industry more broadly, is certainly such an industry. Yet the Court cannot conclude, on this record, that the JV’s likely benefits—which are not insubstantial, including significant efficiencies for Defendants and some mitigation of the decline of Arch and other entities in the

¹⁷ The Court notes again that counsel for Defendants has indicated that they will not litigate an administrative proceeding and will instead abandon the JV if this Court issues a preliminary injunction. As a result, the practical effect of granting an injunction will be to terminate the JV. However, “the parties’ stated intention to abandon the transaction prior to the merits proceeding is a private equity, and cannot on its own overcome the public equities that favor the FTC.” *F.T.C. v. Wilh. Wilhelmsen Holding ASA*, 341 F. Supp. 3d 27, 74 (D.D.C. 2018) (citing *Heinz*, 246 F.3d at 727, and *Sysco*, 113 F. Supp. 3d at 87).

Wyoming coal industry—will outweigh the potential harm to consumers from the lost competition between the two largest producers in the SPRB. PX8001 (Hill Report) Figs. 31-34 (finding net present value of predicted harm to customers from 2021-2030 of between \$1.092 billion and \$1.946 billion). At the very least, the record in this case “rais[es] questions going to the merits so serious, substantial, difficult and doubtful as to make them fair ground for thorough investigation, study, deliberation and determination by the FTC in the first instance” *Tenet Health*, 186 F.3d at 1051 (internal quotations omitted). Accordingly, upon weighing the relevant equities, the Court finds that a preliminary injunction enjoining the JV pending a full administrative hearing on the merits is in the public interest.

CONCLUSION

Having considered all of the evidence presented in this case, the Court cannot help but return to Judge Tatel’s observation in *Whole Foods*: “[T]here can be little doubt that the acquisition of the second largest firm in the market by the largest firm in the market will tend to harm competition in that market.” *Whole Foods*, 548 F.3d at 1043 (Tatel, J., concurring) (citation omitted) (internal quotation marks omitted). The FTC has satisfied its burden of showing a “reasonable probability” that a JV between the two largest SPRB coal suppliers would harm competition in the SPRB coal market. *Brown Shoe*, 370 U.S. at 325. The JV is likely to cause unduly high market concentration in the market for SPRB coal, which, despite the headwinds facing the coal industry, is projected to continue supplying a significant portion of the fuel for electricity generation in the United States for decades to come.¹⁸ The evidence offered by Defendants to rebut the FTC’s prima facie case makes clear that there is meaningful

¹⁸ See EIA Annual Energy Outlook 2020, Table 66, *available at* https://www.eia.gov/outlooks/aeo/tables_ref.php (projecting that almost 200 million tons of SPRB coal will be consumed in 2030, and that annual consumption will remain around 150 million tons per year through 2050).

competition between SPRB coal and other fuels, but it does not rebut the FTC's central claim that there is meaningful coal-on-coal competition that would be lost if the parties were allowed to consummate the JV. The equities also favor granting a preliminary injunction.

The FTC has thus succeeded in showing that, "weighing the equities and considering the Commission's likelihood of ultimate success, [the preliminary injunction] would be in the public interest." *Tenet Health*, 186 F.3d at 1051 (quoting 15 U.S.C. § 53(b)). Accordingly, the Court grants the FTC's Motion for Preliminary Injunction (Doc. [137]). A separate order accompanies this Memorandum Opinion.

Dated this 29th day of September, 2020.

A handwritten signature in cursive script, reading "Sarah E. Pitlyk".

SARAH E. PITLYK
UNITED STATES DISTRICT JUDGE